

Annual Groundwater Monitoring and Corrective Action Report

Texas Municipal Power Agency Gibbons Creek Steam Electric Generating Station Anderson, Texas

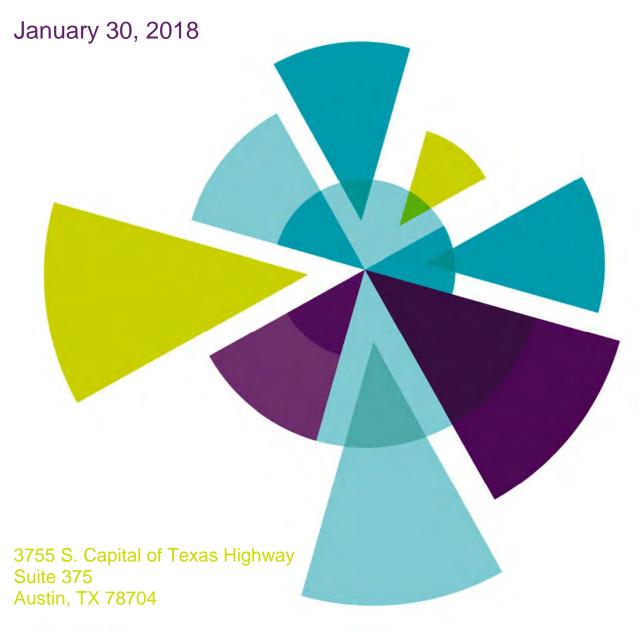




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1. Introduction

The Texas Municipal Power Agency (TMPA) Gibbons Creek Steam Electric Station (GCSES) is located at 12824 FM 244 Road, Anderson, Texas 77830 (Figure 1.1). The GCSES began operating as a 405 Megawatt (MW) capacity power plant burning lignite from the adjacent Bryan Lignite No. 1 mine in 1983. In 1996, the GCSES converted to Powder River Basin coal and the lignite mine was closed.

The GCSES currently operates one Coal Combustion Residuals (CCR) landfill identified as the Site F Landfill (SFL), and two CCR surface impoundments, the Scrubber Sludge Pond (SSP) and Ash Ponds (AP), that are subject to regulation under 40 CFR 257 Subpart D. The locations of the CCR units are shown on Figure 1.2.

The SFL, located northeast of the power generating plant, was constructed in 1990, is approximately 114 acres and receives solid CCR generated by the GCSES. The SSP was constructed in 1982 and began receiving CCR in 1987. The SSP is approximately 7.4 acres in size and 20 feet (ft.) deep. The AP consists of three interconnected ponds that began operation with the start-up of the GCSES in 1987. Each pond is approximately 260 ft. wide, 1,800 ft. long and 20 ft. deep.

This annual groundwater and corrective action report has been prepared to meet the requirements of 40 CFR 257.90(e). This is the initial annual report and there are no corrective action programs for CCR units underway at the facility; therefore, only the status of the groundwater monitoring program is summarized. This report covers the period January 1, 2016 through December 31, 2017.

This report contains a discussion of the installation of groundwater monitoring networks for the CCR units, summarizes the baseline groundwater monitoring events, presents groundwater analytical results, and discusses groundwater flow directions and rates at the CCR units. This report also presents a discussion of the statistical evaluations completed as of the end of 2017.

2. Groundwater Monitoring Networks

2.1 Monitoring Well Installation and Rehabilitation

An initial review of GCSES's existing hydrogeologic and groundwater monitoring data was completed in early 2016 to preliminarily evaluate the location of the uppermost aquifer at each of the CCR units. Following the initial review, a limited field investigation consisting of drilling stratigraphic borings and the installation of five monitoring wells was completed in March 2016. This investigation provides additional aquifer information for use in the final design of the CCR groundwater monitoring networks. Monitoring well locations and well designs were developed and monitoring wells and piezometer were installed in May and June 2016 at the SFL, SSP, and AP. Subsequently, after review of five rounds of groundwater monitoring data, one additional monitoring well was installed at both the SFL and AP in May 2017 to enhance the groundwater monitoring network. The final groundwater monitoring network is comprised of monitoring wells which are utilized for both water level measurements and groundwater sampling, and piezometers which are utilized for water level measurements only.

The new groundwater monitoring wells and piezometers were installed using a truck-mounted hollow stem-auger drilling rig equipped with 8-5/8 in. O.D. (outside diameter) augers. The monitoring wells and piezometers were constructed with 2-inch diameter factory-sealed PVC well screen and casing. The screen sections have 0.010" slot size and the length of the screen was either five or 10 feet, as determined by well-specific hydrogeologic conditions. Well screen and casing sections were joined together by flush-threaded joints with an O-ring seal. The wells and piezometers were completed with a bottom cap. A 20/40-grade sand filter pack



was installed to a depth extending two to three feet above the top of the screen. A two-foot thick annular seal consisting of hydrated bentonite chips or pellets were placed directly above the filter pack. The remaining annular space (to within approximately 12 inches of the surface) was filled with a cement/bentonite grout. All wells and piezometers were finished at the surface with an above-grade, lockable, steel protective pipe and cap set in an approximately four-foot square concrete pad.

After installation, the wells and piezometers were developed by pumping groundwater using a submersible pump until the water was clear and sediment free. During development, the pump was moved up and down within the well screen as needed to ensure development of the full screen length.

After a preliminary data review indicated that additional water quality and water level data was needed at the SFL CCR unit to meet the requirements of baseline sample collection, pre-existing monitoring wells were incorporated into the groundwater monitoring network. These wells were installed by Black and Veatch during pre-SFL construction studies and were periodically sampled between 2010 and 2014. The Black and Veatch wells are labeled as "MNW" wells. Well construction details were examined and the wells were inspected in the field to assess usability for monitoring. Repairs were made to the wells on an 'as needed' basis. The "MNW" wells are used for water level monitoring and/or groundwater sampling as identified in Section 2.2 below.

Well and piezometer construction details for groundwater monitoring networks at the CCR Units are summarized in Table 2.1. Borehole and Completion Logs are included in Appendix A.

2.2 Site F Landfill Groundwater Monitoring Network

The SFL is underlain by stratified, heterogeneous layers of clays, silts, and sands with varying thicknesses. Sandstone was observed at some boring locations as well. The uppermost aquifer is considered confined to semi-confined and generally encountered at depths of 15 to 35 feet below land surface. The elevations of screened intervals in monitoring wells completed in the uppermost aquifer range from approximately 250 feet to 220 feet above mean sea level (amsl). The screened intervals are generally completed in silty sands (SM) with intervals of clayey sands and silts.

The general groundwater flow direction inferred from site data obtained prior to the installation of the CCR groundwater monitoring network was primarily northeast to southwest. Downgradient wells were placed at the unit boundary based on this information. The SFL monitoring network is illustrated on Figure 2.1 and described as follows:

- Background Monitoring Well: MNW-18
- Downgradient Boundary Monitoring Wells: SFL MW-2, SFL MW-3, SFL MW-4, SFL MW-5, SFL MW-6, SFL MW-7, and MNW-15
- Piezometers (water levels only): MNW-11, MNW-17, MNW-16

2.3 Scrubber Sludge Pond Groundwater Monitoring Network

The SSP is underlain by interbedded silty and sandy clays, clay, clayey sands and silty sand. Hard sandstone intervals are intermittently present, as are thin layers of lignite or lignitic silts. The uppermost aquifer is considered confined to semi-confined, and generally encountered at depths of 30 to 40 feet below ground surface. The elevation of monitoring well screened intervals in the uppermost aquifer ranges from approximately 240 ft. above mean sea level (amsl) to 220 ft. amsl. The screened intervals are generally completed in silty sands (SM) and sandy clay (CH).



The general groundwater flow direction at the SSP based on site data at the time of the monitoring well network installation indicated that a groundwater divide exists between the SSP and the adjacent AP. The general groundwater flow direction from northeast to southwest across the SSP was used to locate downgradient wells on the unit boundary. The SSP monitoring network is illustrated on Figure 2.2 and described as follows:

- Background Monitoring Well: SSP/AP MW-1 (used as background for both The AP and SSP networks)
- Downgradient Boundary Monitoring Wells: SSP MW-2, SSP MW-3, SSP MW-4

2.4 Ash Ponds Groundwater Monitoring Network

The subsurface stratigraphic units at the AP are similar to those found beneath the adjacent SSP and groundwater is also considered confined to semi-confined, and generally encountered at depths of 30 to 40 feet below ground surface. The screened intervals are generally completed in in silty sands (SM) and sandy clay (CH).

The general groundwater flow direction at the AP based on site data at the time of the monitoring well network installation indicated a general groundwater flow direction from west to east across the AP. This information was used to locate downgradient wells on the unit boundary. The AP monitoring network is illustrated on Figure 2.2 and described, as follows:

- ▶ Background Monitoring Well: SSP/AP MW-1 (used as background for both The AP and SSP networks)
- Downgradient Boundary Monitoring Wells: AP MW-1D, AP MW-3, AP MW-4, AP MW-5
- ▶ Piezometers (water levels only): AP PZ-1, AP PZ-2, AP PZ-3, AP PZ-4

3. Groundwater Monitoring Events Summary

Groundwater monitoring events completed during 2016 and 2017 consisted of collection of eight baseline groundwater quality samples in accordance with 40 CFR 257.94(b). The well locations relative to each CCR unit, number of samples collected, and sampling dates are summarized in Table 3.1 for the SFL, Table 3. 2 for the SSP, and Table 3.3 for the AP.

The expansion of the groundwater monitoring network at the SFL discussed in Section 2.0 is noted in Table 3.1 which indicates sampling of wells MNW-18, SFL MW-7, and MNW-15 was initiated in May 2017.

Groundwater monitoring was completed in accordance with the methods and procedures documented in the Field Sampling Plan dated October 16, 2017. Field data sheets completed during each of the sampling events are included in Appendix B. Laboratory analytical reports can be found in Appendix C.

4. Groundwater Monitoring Data Summary

4.1 Groundwater Flow

As required by CCR regulations, water levels were measured in monitoring wells prior to the collection of groundwater samples. Water levels were also measured in all monitoring network piezometers. The measured water levels were subtracted from surveyed top-of-casing (TOC) elevations to develop potentiometric surface elevation maps for the CCR units. These maps were used to interpret groundwater flow directions and



gradients. Information on groundwater gradients and hydraulic conductivity of subsurface geologic units was used to calculate groundwater flow rates using the following formula:

 $V = Ki\phi$

Where:

V = average linear velocity (ft./day)

K = hydraulic conductivity (ft./day)

i = hydraulic gradient (ft./ft.)

 ϕ = effective porosity (%)

4.1.1 Site F Landfill

Groundwater level measurements for the SFL monitoring wells are included in Table 4.1. Two complete rounds of water level measurements were collected at the SFL after the expansion of the monitoring network in May 2017. These measurements were completed on June 12, 2017 and August 22, 2017. Potentiometric surface maps for these sampling events are included as Figure 4.1 and 4.2, respectively.

Groundwater flow patterns are similar for the two dates with a general groundwater flow gradient from northeast to southwest. Additional flow directions to the northwest and southeast in the vicinity of the landfill are observed due to an apparent groundwater divide that trends from northeast to southwest.

The average linear velocity of groundwater flow at the SFL is 0.0012 ft./day, or 0.44 ft./year. Groundwater flow velocity was determined using an estimated hydraulic conductivity value of 0.028 ft./day based on observed grain sizes in the screened intervals, a calculated hydraulic gradient of 0.011 ft./ft., and an estimated effective porosity of 25%.

4.1.2 Scrubber Sludge Pond

Groundwater level measurements for the SSP monitoring wells are included in Table 4.2. Groundwater elevations were generally consistent during the eight groundwater monitoring events. Groundwater levels varied by less than one foot in most wells. Potentiometric surface maps are included for June 12, 2017 (Figure 4.3) and August 22, 2017 9(Figure 4.4).

Based on the potentiometric surface maps, the groundwater flow direction in the vicinity of the SSP is southwest.

The average linear velocity of groundwater flow at the SSP is 0.001 ft./day, or 0.365 ft./year. Groundwater flow velocity was determined using an estimated hydraulic conductivity value of 0.028 ft./day, the calculated hydraulic gradient of 0.009 ft./ft. and an estimated effective porosity of 25%.

4.1.3 Ash Ponds

Groundwater level measurements for the AP monitoring wells are included in Table 4.2. Groundwater elevations were generally consistent during the eight groundwater monitoring events. Groundwater levels varied by less than one foot in most wells. The potentiometric surface maps included for the SSP also illustrate the potentiometric surface at the AP on June 12, 2017 (Figure 4.3) and August 22, 2017 (Figure 4.4).

The groundwater flow direction within the AP is generally east with a north-easterly flow direction at the north end of the AP. The average linear velocity of groundwater flow to the east at the AP is 0.001 ft./day, or 0.32



ft./year. The groundwater flow in the eastern direction was calculated using an estimated hydraulic conductivity value of 28 ft./day, a hydraulic gradient of 0.020 ft./ft. and an estimated effective porosity of 25%.

The average linear groundwater velocity to the north at the Ash Ponds is 0.002 ft./day, or 0.83 ft./year. The calculated groundwater flow rate is based on an estimated hydraulic conductivity value of 0.028 ft./day, a hydraulic gradient of 0.008 ft./ft. and an estimated effective porosity of 25%.

4.2 Groundwater Quality

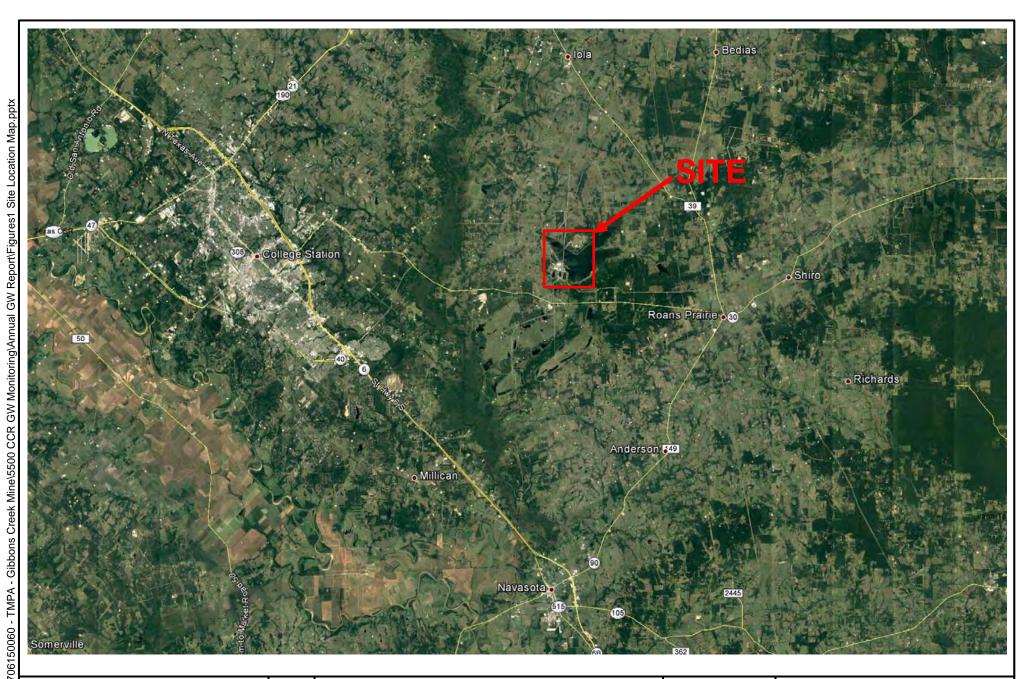
Laboratory analytical results for all sampling events are included in Appendix C.

5. Groundwater Quality Data Analysis

Exploratory Data Analysis (EDA) was completed on the groundwater quality data set collected from the SFL, SSP, and AP monitoring networks in February 2017 and August 2017. The EDA is a preliminary diagnostic data evaluation step to assess the groundwater monitoring networks' ability to collect the correct quantity, quality, and type of data to adequately perform the statistical analyses set forth in 40 CFR 257.93. The EDA included the development of spatiotemporal maps, time series plots, histograms and basic statistics such as mean and standard deviation. Due to the limited number of sampled data points in the EDA, this preliminary analysis does not make a conclusion regarding groundwater impact.



FIGURES



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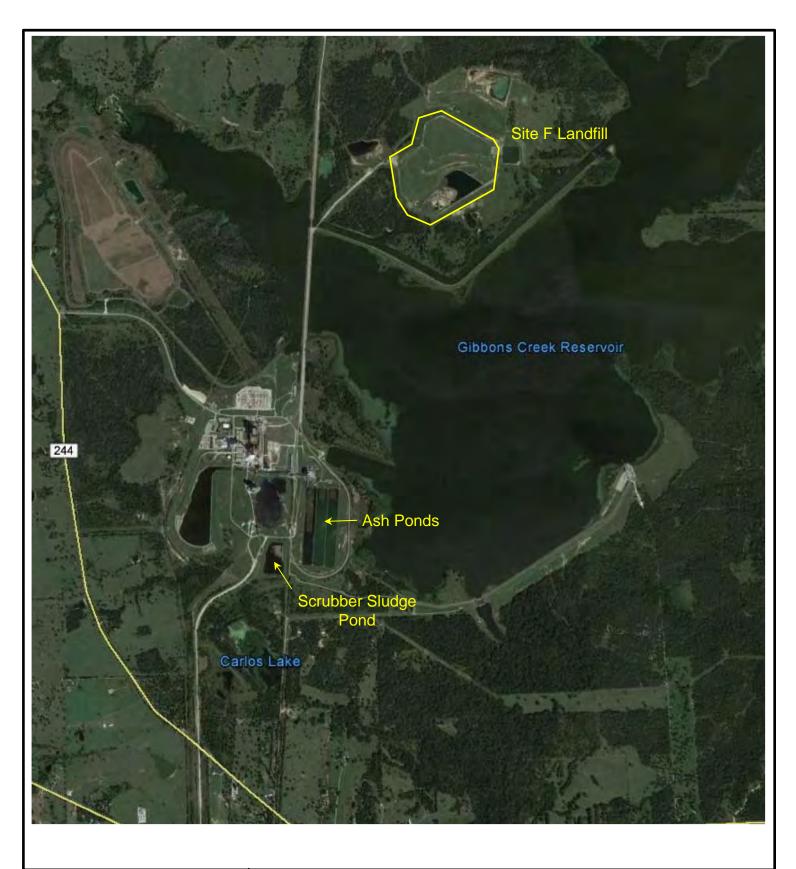


SITE LOCATION MAP

Texas Municipal Power Agency Gibbons Creek Steam Electric Station Grimes County, Texas

Project No. 6706170058 Date: 01/02/2018

Figure 1.1



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Approximate Scale in Miles



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CCR UNITS

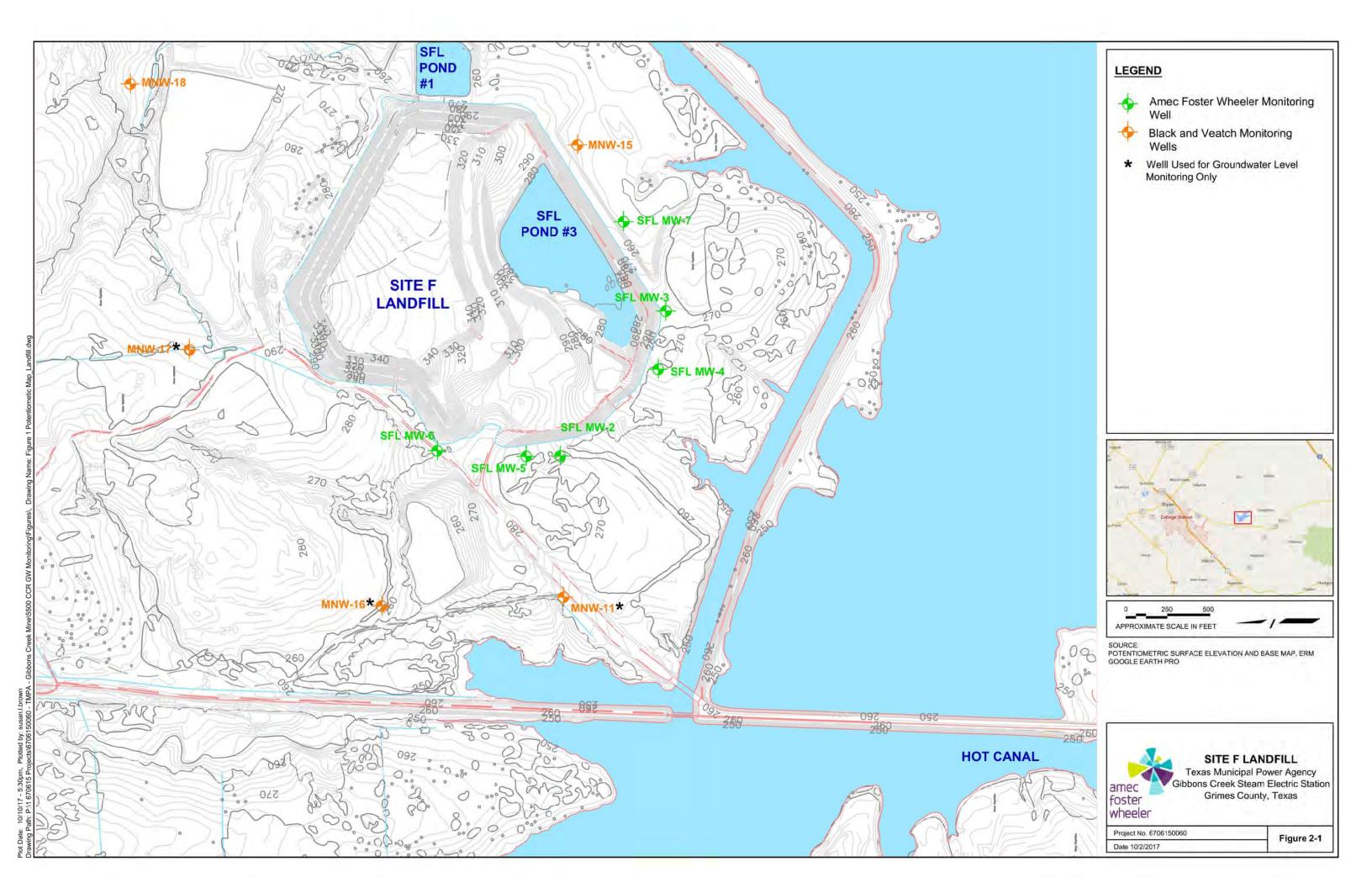
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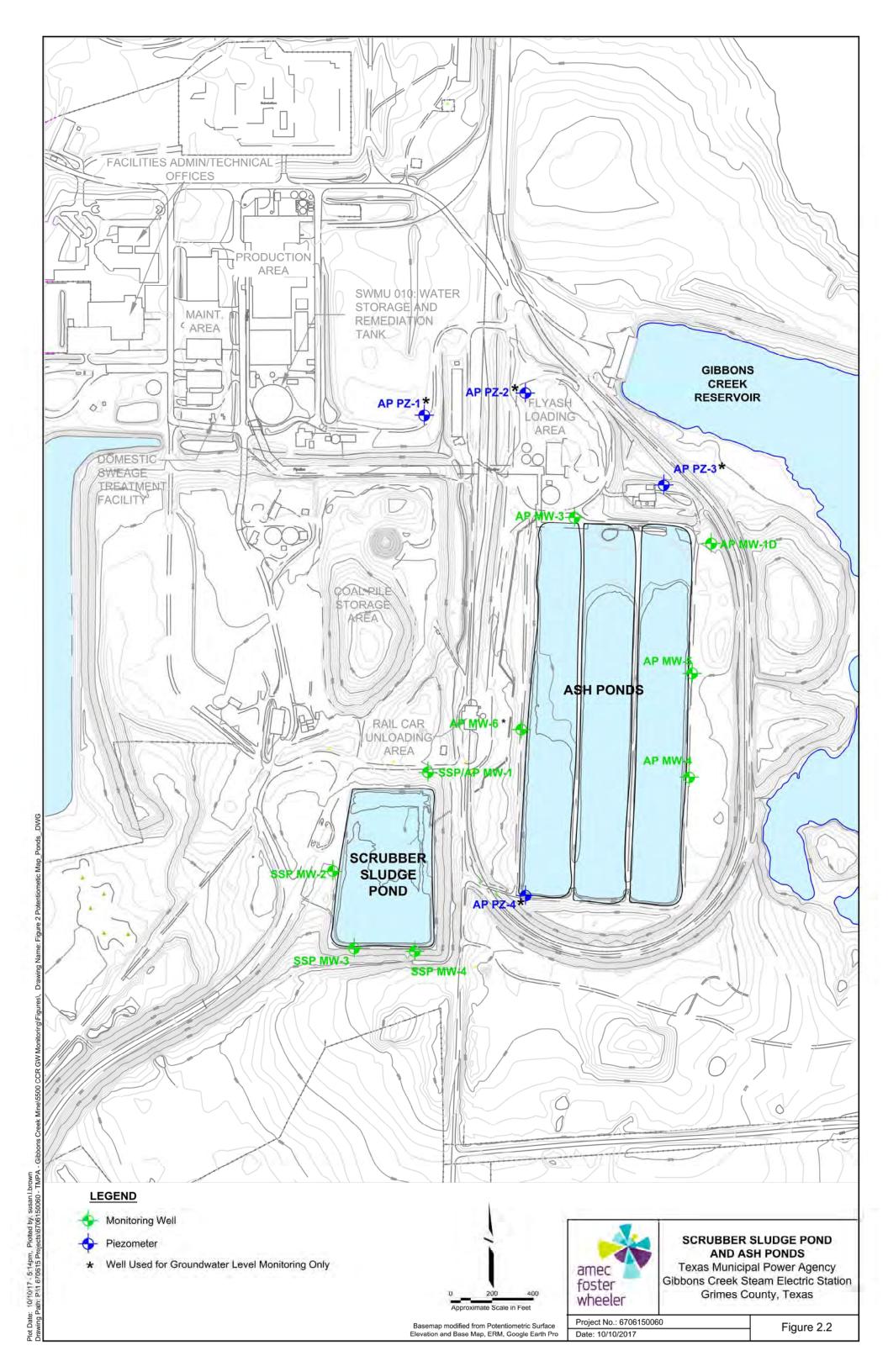
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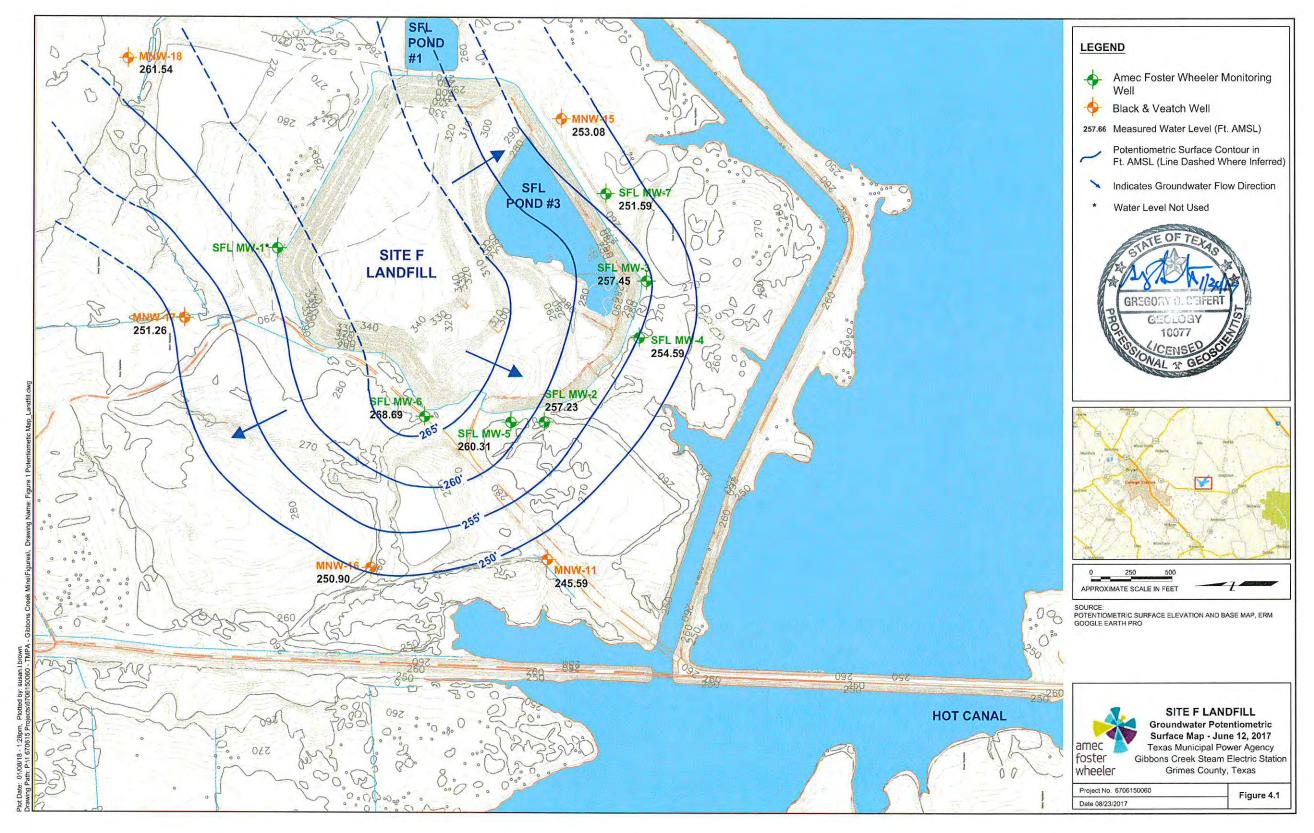
Figure 1.2

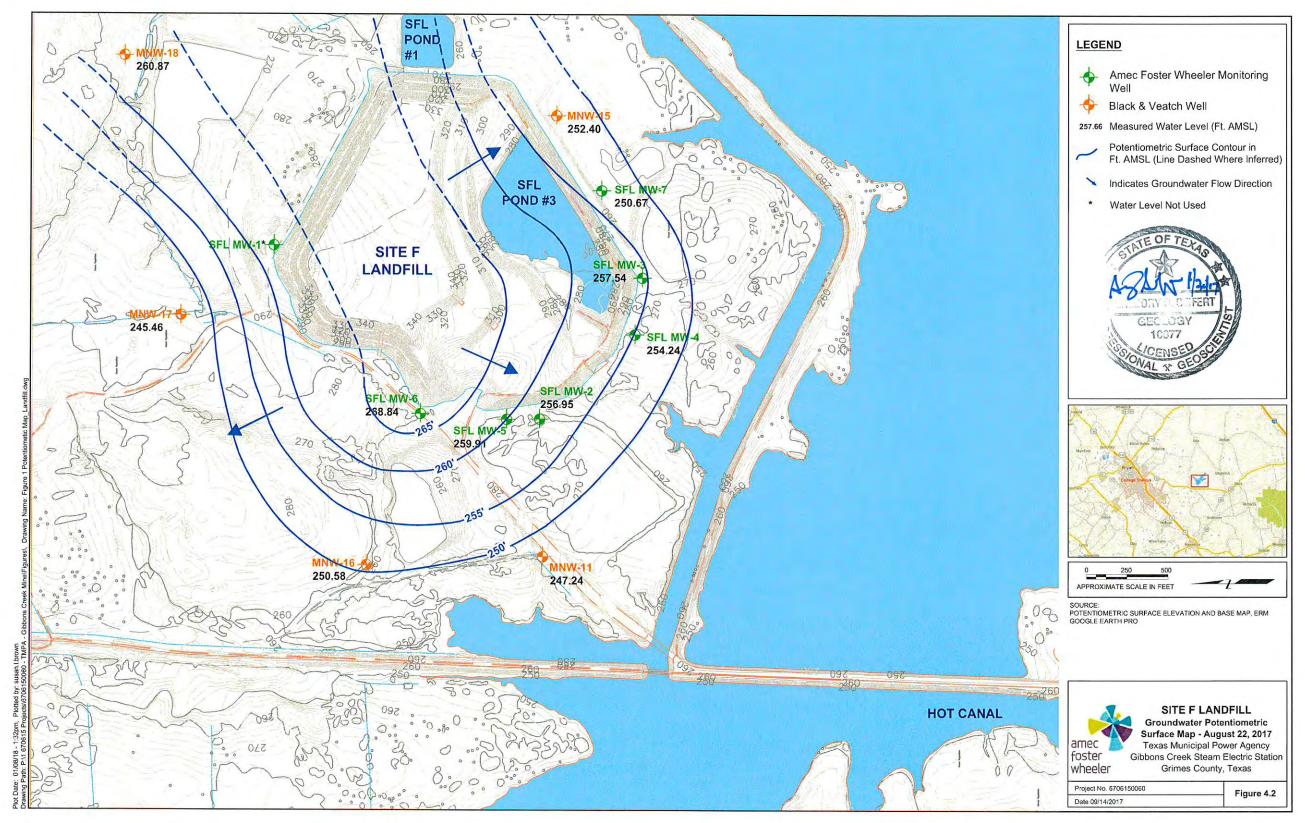
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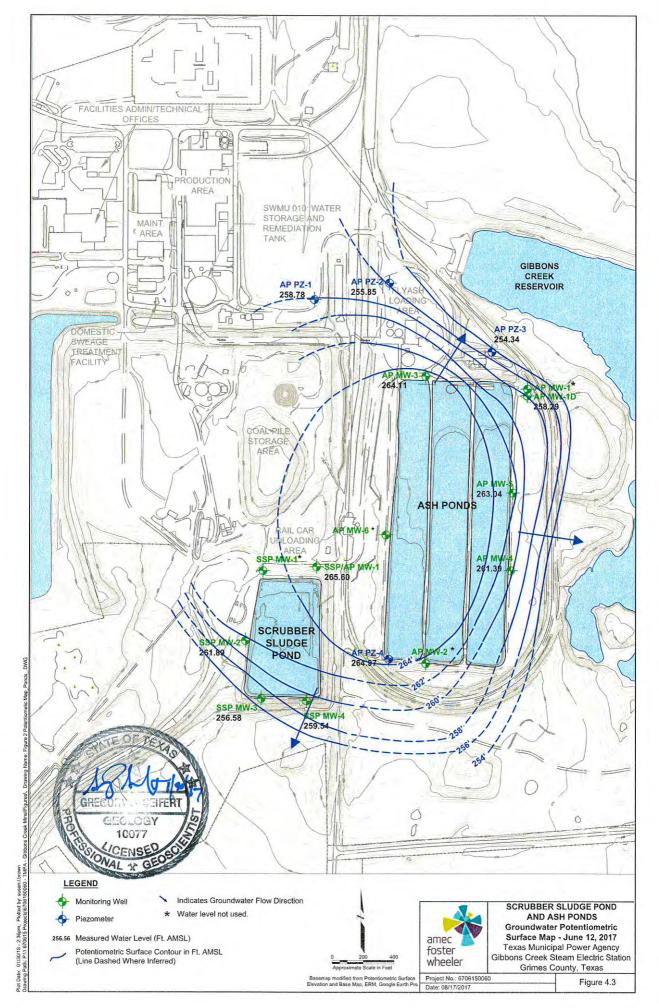
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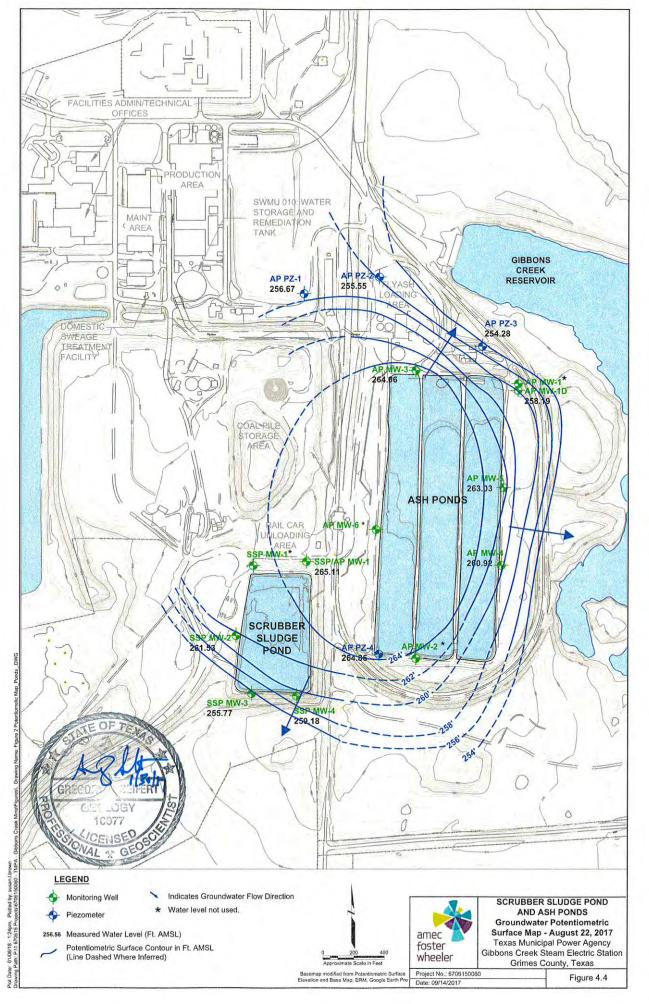














TABLES

Table 2-1
Well Construction Details
TMPA Gibbons Creek Steam Electric Station

					Well	Borehole	Land Surface	Measuring Point	Total Well	Total Well	Total Borehole			Interval		Interval
			Date		Diameter	Diameter	Elevation	Elevation	Depth	Depth	Depth	Total Depth	(ft.	bgs)		ration)
Well ID	Northing	Easting ¹	Completed	Well Construction	(in.)	(in.)	(ft. amsl)	(ft. amsl)	(ft. below TOC)	(ft. bgs)	(ft. bgs)	(elevation)	Top	Bottom	Тор	Bottom
AP MW-1D	10213589.808	3635630.942	May 24, 2016	Schedule 40 PVC	2	8 5/8	269.02	272.04	43.0	40.0	40.0	229.0	34.5	39.5	234.5	229.5
AP MW-3	10213665.476	3635026.590	May 25, 2016	Schedule 40 PVC	2	8 5/8	271.46	274.68	43.4	40.2	40.0	231.3	34.5	39.5	237.0	232.0
AP MW-4	10212415.597	3635562.990	June 1, 2016	Schedule 40 PVC	2	8 5/8	270.93	274.16	52.8	49.6	50.0	221.4	44.5	49.5	226.4	221.4
AP MW-5	10212901.968	3635577.940	June 1, 2016	Schedule 40 PVC	2	8 5/8	271.16	274.13	43.1	40.1	40.0	231.0	30.5	35.5	240.7	235.7
AP PZ-1 ²	10214173.721	3634278.958	May 24, 2016	Schedule 40 PVC	2	8 5/8	262.70	265.67	29.4	26.4	35.0	236.3	21.0	26.0	241.7	236.7
AP PZ-2 ²	10214308.029	3634847.514	May 24, 2016	Schedule 40 PVC	2	8 5/8	271.71	274.91	43.2	40.0	40.0	231.7	34.5	39.5	237.2	232.2
AP PZ-3 ²	10213822.938	3635414.358	May 25, 2016	Schedule 40 PVC	2	8 5/8	255.76	259.11	43.1	39.7	40.0	216.0	34.5	39.5	221.3	216.3
AP PZ-4 ²	10211826.931	3634752.131	June 2, 2016	Schedule 40 PVC	2	8 5/8	271.39	273.65	45.3	43.0	45.0	228.4	38.5	43.5	232.9	227.9
SSP MW-2	10212007.735	3633835.274	June 2, 2016	Schedule 40 PVC	2	8 5/8	280.62	283.66	46.9	43.9	45.0	236.8	38.5	43.5	242.1	237.1
SSP MW-3	10211581.588	3633889.744	June 3, 2016	Schedule 40 PVC	2	8 5/8	280.95	283.97	48.2	45.2	45.0	235.8	39.5	44.5	241.5	236.5
SSP MW-4	10211577.225	3634198.516	June 3, 2016	Schedule 40 PVC	2	8 5/8	280.86	283.86	51.5	48.5	50.0	232.3	43.0	48.0	237.9	232.9
SSP/AP MW-1	10212432.016	3634290.363	May 26, 2016	Schedule 40 PVC	2	8 5/8	269.33	272.53	43.2	40.0	40.0	229.3	29.5	39.5	239.8	229.8
SFL MW-1	10222937.337	3638046.475	March 15, 2016	Schedule 40 PVC	2	8	298.90	301.80	22.8	19.9	22.0	279.0	15.0	20.0	283.9	278.9
SFL MW-2	10220908.018	3636738.712	March 16, 2016	Schedule 40 PVC	2	8	265.69	268.31	23.6	21.0	50.0	244.7	16.0	21.0	249.7	244.7
SFL MW-3	10220174.555	3637846.961	May 25, 2016	Schedule 40 PVC	2	8 5/8	271.65	275.00	28.2	24.9	25.0	246.8	19.5	24.5	252.2	247.2
SFL MW-4	10220291.840	3637261.610	May 31, 2016	Schedule 40 PVC	2	8 5/8	266.46	269.53	42.7	39.6	40.0	226.8	34.5	39.5	232.0	227.0
SFL MW-5	10221191.234	3636721.834	May 23, 2016	Schedule 40 PVC	2	8 5/8	273.33	276.25	24.3	21.4	25.0	251.9	16.0	21.0	257.3	252.3
SFL MW-6	10221819.634	3636700.033	May 23, 2016	Schedule 40 PVC	2	8 5/8	283.49	286.66	23.1	19.9	20.0	263.6	14.5	19.5	269.0	264.0
SFL MW-7	10220517.925	3638408.836	May 3, 2017	Schedule 40 PVC	2	8 5/8	264.83	264.63	58.1	58.3	55.0	206.5	50.0	55.0	214.8	209.8
MNW-11 ²	10220909.018	3635624.897	February 26, 1988	Schedule 40 PVC	2	4 1/2	268.12	267.95	47.3	47.5	48.0	220.7	42.5	47.5	225.7	220.7
MNW-15	10220778.128	3638974.095	February 23, 1988	Schedule 40 PVC	2	4 1/2	257.536	257.331	27.0	27.2	27.7	230.3	22.2	27.2	235.3	230.3
MNW-16 ²	10222188.729	3635593.380	February 25, 1988	Schedule 40 PVC	4	7	263.333	263.191	40.4	40.5	41.0	222.8	35.5	40.5	227.8	222.8
MNW-17 ²	10223663.517	3637468.447	February 17, 1988	Schedule 40 PVC	4	7	293.864	293.724	50.2	50.4	50.9	243.5	45.4	50.4	248.5	243.5
MNW-18	10224118.439	3639397.902	February 18, 1988	Schedule 40 PVC	4	7	270.912	270.755	51.0	51.2	51.7	219.7	46.2	51.2	224.7	219.7

¹Datum - NAD 83 (Conus)

²Water level monitoring only, not used in groundwater quality monitoring

Table 3.1 Site F Landfill Groundwater Sampling Summary 2017 Annual Report TMPA Gibbons Creek Steam Electric Station Anderson, Texas

Well	Location	Monitoring Program	Number of Samples*				Sample Colle	ection Dates			
MNW-18	Upgradient	Baseline	8	5/3/2017	5/30/2017	6/13/2017	6/27/2017	7/19/2017	8/23/2017	8/31/2017	9/7/2017
SFL MW-2	Downgradient	Baseline	8	6/23/2016	8/25/2016	10/19/2016	12/22/2016	2/22/2017	5/3/2017	6/14/2017	8/23/2017
SFL MW-3	Downgradient	Baseline	8	6/23/2016	8/25/2016	10/19/2016	12/22/2016	2/23/2017	5/2/2017	6/14/2017	8/22/2017
SFL MW-4	Downgradient	Baseline	8	6/23/2016	8/25/2016	10/19/2016	12/22/2016	2/22/2017	5/2/2017	6/14/2017	8/22/2017
SFL MW-5	Downgradient	Baseline	8	6/23/2016	8/25/2016	10/19/2016	12/21/2016	2/23/2017	5/3/2017	6/14/2017	8/23/2017
SFL MW-6	Downgradient	Baseline	8	6/23/2016	8/25/2016	10/19/2016	12/21/2016	2/22/2017	5/3/2017	6/13/2017	8/23/2017
SFL MW-7	Downgradient	Baseline	8	5/11/2017	5/31/2017	6/14/2017	6/28/2017	7/20/2017	8/23/2017	8/31/2017	9/7/2017
MNW-15	Downgradient	Baseline	8	5/2/2017	5/31/2017	6/14/2017	6/28/2017	7/20/2017	8/22/2017	8/31/2017	9/7/2017

^{*} does not include duplicate samples for QA

Table 3.2 Scrubber Sludge Ponds Groundwater Sampling Summary 2017 Annual Report TMPA Gibbons Creek Steam Electric Station Anderson, Texas

Well	Location	Monitoring Program	Number of Samples*				Sample Colle	ection Dates			
SSP APMW-1	Upgradient	Baseline	8	6/21/2016	8/23/2016	10/17/2016	12/20/2016	2/21/2017	5/3/2017	6/12/2017	8/23/2017
SSP MW-2	Downgradient	Baseline	8	6/21/2016	8/23/2016	10/18/2016	12/20/2016	2/21/2017	5/3/2017	6/14/2017	8/24/2017
SSP MW-3	Downgradient	Baseline	8	6/21/2016	8/23/2016	10/18/2016	12/20/2016	2/21/2017	5/4/2017	6/13/2017	8/24/2017
SSP MW-4	Downgradient	Baseline	8	6/21/2016	8/23/2016	10/18/2016	12/20/2016	2/21/2017	5/4/2017	6/14/2017	8/24/2017

^{*} does not include duplicate samples for QA

Table 3.3 Ash Ponds Groundwater Sampling Summary 2017 Annual Report TMPA Gibbons Creek Steam Electric Station Anderson, Texas

		Monitoring	Number of								
Well	Location	Program	Samples*				Sample Collec	ction Dates			
SSP/AP MW1	Upgradient	Baseline	8	6/21/2016	8/23/2016	10/17/2016	12/20/2016	2/21/2017	5/3/2017	6/12/2017	8/23/2017
AP MW-1D	Downgradient	Baseline	8	6/22/2016	8/24/2016	10/18/2016	12/20/2016	2/21/2017	5/4/2017	6/13/2017	8/24/2017
AP MW-3	Downgradient	Baseline	8	6/22/2016	8/24/2016	11/10/2016	12/21/2016	2/20/2017	5/3/2017	6/12/2017	8/22/2017
AP MW-4	Downgradient	Baseline	8	6/22/2016	8/24/2016	10/18/2016	12/20/2016	2/21/2017	5/4/2017	6/12/2017	8/24/2017
AP MW-5	Downgradient	Baseline	8	6/22/2016	8/24/2016	10/18/2016	12/20/2016	2/21/2017	5/4/2017	6/12/2017	8/24/2017

^{*} does not include duplicate samples for QA

Table 4.1 Site F Landfill Groundwater Elevation Summary 2017 Annual Report

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	5/2/2017	19.64	268.115	248.48
	5/31/2017	21.41	268.115	246.71
	6/12/2017	22.53	268.115	245.59
MNW-11	6/28/2017	22.87	268.115	245.25
1011406-11	7/19/2017	23.02	268.115	245.10
	8/22/2017	20.88	268.115	247.24
	8/31/2017	22.74	268.115	245.38
	9/7/2017	25.40	268.115	242.72
	5/2/2017	4.63	257.536	252.91
	5/31/2017	4.85	257.536	252.69
	6/12/2017	4.46	257.536	253.08
NANI\A/ 1 F	6/28/2017	4.59	257.536	252.95
MNW-15	7/20/2017	4.98	257.536	252.56
	8/22/2017	5.14	257.536	252.40
	8/31/2017	4.65	257.536	252.89
	9/7/2017	5.00	257.536	252.54
	5/2/2017	13.53	263.333	249.80
	5/30/2017	12.62	263.333	250.71
	6/12/2017	12.43	263.333	250.90
NANIVA / 1.6	6/27/2017	12.49	263.333	250.84
MNW-16	7/19/2017	12.61	263.333	250.72
	8/22/2017	12.75	263.333	250.58
	8/31/2017	12.27	263.333	251.06
	9/7/2017	12.37	263.333	250.96
	5/2/2017	35.26	293.864	258.60
	5/30/2017	38.61	293.864	255.25
NANINA/ 17	6/12/2017	42.6	293.864	251.26
MNW-17	6/27/2017	44.74	293.864	249.12
	7/19/2017	48.23	293.864	245.63
	8/22/2017	48.40	293.864	245.46
	5/2/2017	8.84	270.912	262.07
	5/30/2017	9.40	270.912	261.51
	6/12/2017	9.37	270.912	261.54
	6/27/2017	9.43	270.912	261.48
MNW-18	7/19/2017	9.71	270.912	261.20
	8/22/2017	10.04	270.912	260.87
	8/31/2017	9.83	270.912	261.08
	9/7/2017	9.87	270.912	261.04

Table 4.1 Site F Landfill Groundwater Elevation Summary 2017 Annual Report TMPA Gibbons Creek Steam Electric Station Anderson, Texas

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	6/23/2016	14.85	269.53	254.7
	8/25/2016	15.05	269.53	254.5
	10/19/2016	14.81	269.53	254.72
CEL NAVA / 2	12/22/2016	15.41	269.53	254.12
SFL MW-2	2/22/2017	14.79	269.53	254.74
	5/3/2017	11.17	268.31	257.14
	6/12/2017	11.08	268.31	257.23
	8/22/2017	11.36	268.31	256.95
	6/23/2016	11.22	268.31	257.1
	8/25/2016	11.37	268.31	256.9
	10/19/2016	11.24	268.31	257.07
CEL NAVA / 2	12/22/2016	11.68	268.31	256.63
SFL MW-3	2/23/2017	11.32	268.31	256.99
	5/2/2017	17.55	275.00	257.45
	6/12/2017	17.55	275.00	257.45
	8/22/2017	17.46	275.00	257.54
	6/23/2016	17.63	275.00	257.4
	8/25/2016	17.34	275.00	257.7
	10/19/2016	17.07	275.00	257.93
SFL MW-4	12/22/2016	17.69	275.00	257.31
3FL IVIVV-4	2/22/2017	17.42	275.00	257.58
	5/2/2017	14.87	269.53	254.66
	6/12/2017	14.94	269.53	254.59
	8/22/2017	15.29	269.53	254.24
	6/23/2016	15.91	276.25	260.3
	8/25/2016	16.11	276.25	260.1
	10/19/2016	16.07	276.25	260.18
SFL MW-5	12/21/2016	16.30	276.25	259.95
31 2 11111 3	2/23/2017	16.03	276.25	260.22
	5/3/2017	15.85	276.25	260.40
	6/12/2017	15.94	276.25	260.31
	8/22/2017	16.34	276.25	259.91
	6/23/2016	17.50	286.66	269.2
	8/25/2016	17.14	286.66	269.5
	10/19/2016	17.01	286.66	269.65
SFL MW-6	12/21/2016	17.50	286.66	269.16
SI LIVIVV-O	2/22/2017	17.67	286.66	268.99
	5/3/2017	17.95	286.66	268.71
	6/12/2017	17.97	286.66	268.69
	8/22/2017	17.82	286.66	268.84

Table 4.1 Site F Landfill Groundwater Elevation Summary 2017 Annual Report TMPA Gibbons Creek Steam Electric Station Anderson, Texas

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	5/11/2017	13.56	264.831	251.27
	5/31/2017	13.56	264.831	251.27
	6/12/2017	13.24	264.831	251.59
SFL MW-7	6/28/2017	13.42	264.831	251.41
SFL IVIVV-7	7/20/2017	13.21	264.831	251.62
	8/22/2017	14.16	264.831	250.67
	8/31/2017	13.01	264.831	251.82
	9/7/2017	13.15	264.831	251.68

Table 4.2 Scrubber Sludge Pond and Ash Ponds Groundwater Elevation Summary 2017 Annual Report

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	6/21/2016	6.72	272.53	265.8
	8/23/2016	6.80	272.53	265.7
	10/17/2016	6.40	272.53	266.13
	12/20/2016	7.04	272.53	265.49
SSP/AP MW-1	2/21/2017	6.42	272.53	266.11
	5/3/2017	6.64	272.53	265.89
	6/12/2017	6.93	272.53	265.60
	8/22/2017	7.42	272.53	265.11
	6/21/2016	12.38	283.66	271.3
	8/23/2016	21.33	283.66	262.3
	10/17/2016	21.31	283.66	262.35
SSP MW-2	12/20/2016	22.04	283.66	261.62
55P IVIVV-2	2/21/2017	21.37	283.66	262.29
	5/3/2017	21.52	283.66	262.14
	6/12/2017	21.77	283.66	261.89
	8/22/2017	22.13	283.66	261.53
	6/21/2016	26.54	283.97	257.4
	8/23/2016	27.41	283.97	256.6
	10/17/2016	27.21	283.97	256.76
SSP MW-3	12/20/2016	27.63	283.97	256.34
33F WW-3	2/22/2017	26.90	283.97	257.07
	5/4/2017	27.09	283.97	256.88
	6/12/2017	27.39	283.97	256.58
	8/22/2017	28.20	283.97	255.77
	6/21/2016	24.11	283.86	259.7
	8/23/2016	24.19	283.86	259.7
	10/17/2016	24.25	283.86	259.61
SSP MW-4	12/20/2016	24.36	283.86	259.50
331 11111	2/21/2017	23.74	283.86	260.12
	5/4/2017	23.98	283.86	259.88
	6/12/2017	24.32	283.86	259.54
	8/22/2017	24.68	283.86	259.18
	6/22/2016	13.91	272.04	258.1
	8/24/2016	13.79	272.04	258.2
	10/17/2016	13.48	272.04	258.56
AP MW-1D	12/21/2016	14.06	272.04	257.98
VI 14144-ID	2/21/2017	13.69	272.04	258.35
	5/4/2017	13.84	272.04	258.20
	6/12/2017	13.75	272.04	258.29
	8/22/2017	13.85	272.04	258.19

Table 4.2 Scrubber Sludge Pond and Ash Ponds Groundwater Elevation Summary 2017 Annual Report

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	6/22/2016	10.46	274.68	264.2
	8/24/2016	10.43	274.68	264.3
	10/17/2016	10.22	274.68	264.46
AP MW-3	12/21/2016	10.65	274.68	264.03
AP IVIVV-3	2/20/2017	10.48	274.68	264.20
	5/3/2017	10.65	274.68	264.03
	6/12/2017	10.57	274.68	264.11
	8/22/2017	10.62	274.68	264.06
	6/22/2016	12.86	274.16	261.3
	8/24/2016	13.06	274.16	261.1
	10/17/2016	13.06	274.16	261.10
AP MW-4	12/21/2016	13.15	274.16	261.01
AF IVIVV-4	2/21/2017	12.72	274.16	261.44
	5/4/2017	13.15	274.16	261.01
	6/12/2017	12.77	274.16	261.39
	8/22/2017	13.24	274.16	260.92
	6/22/2016	10.99	274.13	263.1
	8/24/2016	10.96	274.13	263.2
	10/17/2016	10.82	274.13	263.31
AP MW-5	12/21/2016	11.15	274.13	262.98
711 10100 3	2/21/2017	10.98	274.13	263.15
	5/4/2017	11.17	274.13	262.96
	6/12/2017	11.09	274.13	263.04
	8/22/2017	11.10	274.13	263.03
	8/23/2016	6.75	265.67	258.92
	10/17/2016	8.31	265.67	257.36
	12/20/2016	6.75	265.67	258.92
AP PZ-1	2/21/2017	6.75	265.67	258.92
	5/2/2017	8.10	265.67	257.57
	6/12/2017	9.00	265.67	256.67
	8/22/2017	9.00	265.67	256.67

Table 4.2 Scrubber Sludge Pond and Ash Ponds Groundwater Elevation Summary 2017 Annual Report

Well	Date	Depth to Water (ft. below MP)	Measuring Point Elevation ¹ (ft. amsl)	Water Level Elevation (ft. amsl)
	8/23/2016	18.94	274.91	255.97
	10/17/2016	18.84	274.91	256.07
	12/20/2016	18.94	274.91	255.97
AP PZ-2	2/21/2017	18.94	274.91	255.97
	5/2/2017	18.98	274.91	255.93
	6/12/2017	19.36	274.91	255.55
	8/22/2017	19.36	274.91	255.55
	8/23/2016	4.61	259.11	254.50
	10/17/2016	4.52	259.11	254.59
	12/20/2016	4.61	259.11	254.50
AP PZ-3	2/21/2017	4.61	259.11	254.50
	5/2/2017	4.81	259.11	254.30
	6/12/2017	4.83	259.11	254.28
	8/22/2017	4.83	259.11	254.28
	8/23/2016	8.40	273.65	265.25
	10/17/2016	8.72	273.65	264.93
	12/20/2016	8.40	273.65	265.25
AP P7-4	2/21/2017	8.40	273.65	265.25
AF F Z-4	5/2/2017	8.74	273.65	264.91
	6/12/2017	8.80	273.65	264.85
	8/22/2017	8.80	273.65	264.85
	9/7/2017	8.38	273.65	265.27



APPENDIX A

Borehole and Well Completion Logs

	PROJECT: TMPA Gibbons Creek Plant Carlos, Texas						g of V	Vell l	No. AP	MW-1D
BORING LOCATION	N: Northe	east Corne	er of Ash Pon	ds		GROUND	SURFACE	ELEVA	TION AND DA	ATUM:
DRILLING CONTRA	ACTOR:	Best Dril	ling			DATE STA 5/24/16	RTED:		DATE FINI 5/24/16	SHED:
DRILLING METHOL	D: HSA	4				TOTAL DE 40.0	, ,	4.TD	SCREEN II 34.5'-39.	NTERVAL (ft.): 5
DRILLING EQUIPM	IENT: {	3 5/8" OD	HSA Truck M	lounded Rig		DEPTH TO		AID:	CASING:	
SAMPLING METHO	DD: 5'	x 4" Core	Barrel			LOGGED B		P.G.		
HAMMER WEIGHT	: NA		DROP:	NA		RESPONS Daniel B	IBLE PRO	FESSIO	NAL:	REG. NO. 1773
Cfeet) (feet) No. Sample Sample Blows/		NAME (USCS): color, mo cementation	ESCRIPTION ist, % by wt., plast. der react. w/HCl, geo. into	nsity, structi er.		, , , , , , , , , , , , , , , , , , ,		DETA	ONSTRUCTION ILS AND/OR NG REMARKS
- - - -			clay fill to 4.5'						– 2" Diamete	r PVC
5-		hard, tr sand to SAND\ moist, I Lignite, SAND\ fine-gra minor fo SAND\	ace calcium ca 5' CLAY (CH): lighter fraction of the common of the co	(CH): light yellowish rbonate nodules, fir ght yellowish-browned sand, trace pebbighly moist, firm 7'-8 ght olive brown, moise of small gravel size that olive brown, browstiff	ne-grained , slightly ples 3.5' st, very sti re nodules	off,				
15-		CLAYE fine-gra CLAYE fine-gra SILTY	Y SAND (SC): nined sand Y SAND (SC): nined sand	irk gray, very moist light olive brown, m light olive brown, m ht olive brown, wet,	oist, firm,	stiff,			– Grout	
20-		SILTY		ht olive brown, wet,	loose,					
25 Amec Foster V	Whoolar	n viron m s	ot 9 Infrastru	turo los			Project N	670045	20000 04 000	WELLS
AITIECT USIEL V	ALICCIGI EL	I VII OI II II EI	n a minastiut	iuie, iiio.		!	roject INO	. 07 00 10	0060.01.006	i aye i Ui Z

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. AP MW-1D (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS 1" hard shaley sand lenses at 25.5' SILTY SAND (SM): light olive brown, wet, loose, fine-grained, one ferrsous stained sand lense 30 at 16' SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand 2" sandstone lense, hard at 31.5' Bentonite 4" sandstone lense, hard at 33' 20/40 Grade Silica Sand 3" sandstone lense, ferrous staining, hard, blocky at ∇ 35 SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand Schedule 40 PVC 0.010 SILTY SAND (SM): light olive brown with very thin Slot Screen lignite lenses 2" hard sandstone layer at 40' 6" End Cap 40 Total Depth = 40' 45 50

WELL3

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Carlo	os, Texas		Log of Well No. AP-MW-3 GROUND SURFACE ELEVATION AND DATUM:					
BORING LOCATION:	Northea	st Corner of Ash Ponds	GROUND	OURFACE ELEVA	HON AND L	ATOM.		
DRILLING CONTRACT	OR: B	est Drilling	DATE STAI 5/25/16	RTED:	DATE FINISHED: 5/25/16			
DRILLING METHOD:	HSA		TOTAL DEI	PTH (ft.):	SCREEN INTERVAL (ft.): 34.5'-39.5			
DRILLING EQUIPMEN	T: 8 5	/8" OD HSA Truck Mounded Rig		DEPTH TO WATER ATD: CASING:				
SAMPLING METHOD:	5' x 4	" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.					
HAMMER WEIGHT:	NA	DROP: NA	RESPONS	IBLE PROFESSIO				
DEPTH (feet) Sample No. Sample Blows/ Foot	OVM	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, stru cementation, react. w/HCl, geo. inter. rface Elevation:		B. Haug, P.G. 1773 WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS				
5- - - 10- - 15- - -		SANDY CLAY with gravel (CH): brown, moist, firm fine-grained sand, few small gravel, (fill) SANDY CLAY with gravel (CL): brown and reddish-brown, moist, very stiff, fine-grained sand, small gravel, few clay clasts, 3-4' layers (fill) SANDY CLAY with gravel (CL): brown mottled, movery stiff, fine-grained sand, trace of small gravel (fine-grained sand) SILTY SAND (SM): light olive brown, moist, firm, fine-grained sand SILTY SAND (SM): light olive brown, moist, fine-grained sand	few		− 2" Diamet	er PVC		
20-		SILTY SAND (SM): light olive brown, wet, fine-grasand	ined					
25	eeler Envii					WE		

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. AP-MW-3 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. DETAILS AND/OR DRILLING REMARKS SILTY SAND (SM): light olive brown, wet, fine-grained sand - siltsone interbedded with loose sand 27.5'-28.75' Siltstone, light olive gray, dry, hard at 28.75' and 29.5' SILTY SAND (SM): light olive brown, moist, 30 fine-grained sand SITLY SAND (SM): light olive brown, wet, fine-grained Bentonite sand 20/40 Grade Silica Sand 35 SILTY SAND (SM): light olive brown, wet, fine-grained sand Schedule 40 PVC 0.010 Slot Screen 6" End Cap 40 Total Depth = 40' 45 50

WELL3

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Carlos, Texas BORING LOCATION: East of Ash Ponds					Log of Well No. AP MW-4 GROUND SURFACE ELEVATION AND DATUM:						
BORING LOCATI	ON: Eas	t of Ash Por	nds 				T				
DRILLING CONTRACTOR: Best Drilling						RTED:	6/1/16	NISHED:			
DRILLING METHOD: CME 75 HSA						PTH (ft.):	SCREEN	SCREEN INTERVAL (ft.):			
					50.0 DEPTH TO	WATER ATD:		44.5'-49.5' CASING:			
DRILLING EQUIP	/MENT:	CIVIE 75 8	5/8 UD HSA		48	2)/.					
SAMPLING METHOD: 5' x 4" Core Barrel						LOGGED BY: Daniel B. Haug, P.G.					
HAMMER WEIGH	ıt: N	A DROP: NA				IBLE PROFESS . Haug, P.G.		ONAL: REG. NO. 1773			
Cfeet) Sample No. Sample	Foot SS Reading	NAME (DESCRIPTION (USCS): color, moist, % by wt., plas cementation, react. w/HCl, ge			. Haug, 1 .O.	WELL DE	CONSTRUCTION FAILS AND/OR LING REMARKS			
S S			evation: Y CLAY (CL): dark yellowish-b	rown brown							
- - -		moist,	stiff, fine-grained sand, sand fil	II to 3.5'			2" Diame	ter PVC			
_		SAND' sand	Y CLAY (CH): brown, moist, st	tiff, fine-grained	i						
5-			Y CLAY (CH): brown, mottled, fine-grained sand	moist, firm, cla	ay						
10-			Y CLAY (CL): yellowish-brown ained sand, few pebbles	, moist, firm,							
15-			Y CLAY (CL): olive brown and stiff, 3" lignite lense at 14.75'	yellowish-brow	vn,						
-			Y CLAY (CL): yellowish-brown ained sand, bedding planes, ye s		ζ						
20-			Y CLAY (CL): yellowish-brown ained sand, bedding planes	, moist, stiff,			—— Grout				
25		Lignite	, black, moist, firm 23.5'-25'								

TMPA Gibbons Creek Plant PROJECT: Carlos, Texas Log of Well No. AP MW-4 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, **DETAILS AND/OR** cementation, react. w/HCl, geo. inter. DRILLING REMARKS SANDY CLAY (CH): yellowish-brown, moist, soft, fine-grained sand, discontinous lignite lenses Lignite, black, moist, firm 26.5'-30' 30 SANDY CLAY (CH): olive-brown, moist, fine-grained sand, stiff Perched water at 32' Lignite, black, dry, stiff 34'-37.5' 35 Interbedded silty sand and sandy clay, thin bedded (1/4" - 1/2"), olive brown, sandy clay, gray silty sand, dry, stiff, fine-grained sand Bentonite Lignite, black, dry, hard, 6" 40 CLAY (CL): black, dry, hard, blocky, some interbedded black lignite 20/40 Grade Silica Sand 45 SANDY CLAY (CL): black, dry, hard, fine-grained sand, platty Schedule 40 PVC 0.010 Slot Screen ∇ SILTY SAND (SM): dark olive brown, wet, loose, bedding planes, fine-grained sand 6" End Cap 50 Total Depth =50' 55 WELL3

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Amec Foster Wheeler Environment & Infrastructure, Inc.

Carlos, Texas BORING LOCATION: East Center of Ash Ponds					GROUND SURFACE ELEVATION AND DATUM:							
DURING LUCATION: East Genter Of ASIT POHOS					NA DATE STARTED: DATE FINISHED:							
DRILLING CONTRACTOR: Best Drilling						6/1/16	KIED:		6/1/16	ISHED:		
וו ו ווסר	NG M	IETHOD:	CI	//E 75 HS/				TOTAL DE	PTH (ft.)):	SCREEN	INTERVAL (ft.):
DRILLING METHOD: CME 75 HSA					40.0			30.5'-35.5'				
						DEPTH TO WATER ATD: 0			CASING:			
	INIC	METHOD:		5' x 4" Core	Dorrol			LOGGED I	BY:			
SAIVIFL	LING I	VIETHOD.		X4 COIE	Dallel			Daniel B	. Haug	, P.G.	20.10.1	DEC 110
HAMMER WEIGHT: NA				Ą	DROP: NA			RESPONSIBLE PROFESSION Daniel B. Haug, P.G.			ONAL: REG. NO. 1773	
DEPTH (feet) (feet) No. Sample No. Blows/ Foot OVM			OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, str cementation, react. w/HCl, geo. inter.						,,		CONSTRUCTION AILS AND/OR
	Sar	Sar Bio Fr	A M	Surface Elevation: NA							DRILL	ING REMARKS
		Sand and clay fill to 2.5'										
_					DY CLAY (CH): yellowish-brown, moist, firm the fine-grained sand, some mottling)			— 2" Diameter PVC	
5- -						light yellowish-brown fine-grained sand	, moist, s	tiff,				
10-				yellowi	, ,	reddish-brown then li '-15'), moist, stiff, san nnd	~	ı			— Grout	
15- -					Y CLAY (CH): ained sand	yellowish-brown, mo	ist, firm,					
_					EY SAND (SC ained sand, fe): yellowish-brown, wo w gravel	et, firm,					
20-				fine-gra SAND	ained sand, cl Y CLAY (CH):	yellowish-brown, moi ay clasts reddish-brown mottle r, firm, fine-grained sa	ed with					
- - 25-					n-brown streal	brown mottled with force, moist, fine-grained		W				
20												WE

PROJECT: TMPA Gibbons Creek Plant Log of Well No. AP MW-5 (cont'd) Carlos, Texas SAMPLES OVM Reading WELL CONSTRUCTION Sample Blows/ Foot DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SANDY CLAY (CH): brown, moist, fine-grained sand to small gravel Bentonite ∇ 20/40 Grade Silica Sand CLAYEY SAND (SC): brown, wet, firm, fine- to 30 coarse-grained sand SANDY CLAY (CL): light yellowish-brown, moist, stiff, fine-grained sand, ferrous staining Schedule 40 PVC 0.010 Slot Screen 35 SANDY CLAY (CL): light yellowish-brown, very moist to 6" End Cap wet, medium-grained sand CLAYEY SILTY SAND (SC-SM): dark greenish gray, slightly moist, fine-grained sand 40 Total Depth = 40' 45 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

	los, Tex	ons Creek Plant as	Log of V	Vell No. AP MW-6
ORING LOCATION:	West	Side of Ash Ponds	GROUND SURFACE E	ELEVATION AND DATUM:
ORILLING CONTRAC	CTOR:	Tolunay-Wong	DATE STARTED: 5/3/17	DATE FINISHED: 5/5/17
DRILLING METHOD:		6A with Continous Core Barell	TOTAL DEPTH (ft.): 50.0 DEPTH TO WATER AT	SCREEN INTERVAL (ft.): 41'-46'
PRILLING EQUIPME	NI:	CME 75	LOGGED BY:	
SAMPLING METHOD): 5	' x 4.25" OD Core Barrel	Daniel B. Haug, P	
HAMMER WEIGHT:	N.A	DROP: NA	Daniel B. Haug, P	I
Cample Sample Sample Sample Sample Blows/ East	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter.	structure,	WELL CONSTRUCTION DETAILS AND/OR
Sal Sal	- ~~	Surface Elevation:		DRILLING REMARKS
-	0.3	Grass at the surface, gravel, sand and clay mat 4.25' (probable fill)	erial to	2" Schedule 40 PVC Riser
5-		SANDY CLAY (CL): yellowish-brown, moist, still ferrous nodules, trace of caliche, fine-grained sa	and	
- - -	0.1	SILT (ML) with lignite: reddish-brown, dry, firm, little recovery	very -	
10-		CLAY (CL): reddish-brown, slightly moist, firm Lignite with clay, dark red, slightly moist, firm SANDY CLAY (CL): yellowish-brown, dry, firm,	very	
15-	0.1	fine-grained sand 2" lignite seam, dark reddish-brown, slightly mo CLAY (CH): yellowish-brown, slightly moist to m stiff, ferrous staining Interbedded CLAY and LIGNITE (0-CL): black to reddish-brown, dry, frim to hard	noist,	Bentonite Grout
20-	1.8	1" cemented lenses with gypsum		
-	2.1	LIGNITE (0) with hard lenses of cemented clay with organics: dark brown, dry, hard	and slit	
		SANDY CLAY (CL): dark brown, dry, stiff, very fine-grained sand, numerous thin very fine-grain sand partings, laminated	ned	
25				W

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas

Amec Foster Wheeler Environment & Infrastructure, Inc.

Log of Well No. AP MW-6 (cont'd)

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ا چ	SAN <u>a</u>	MPLES	Mil	DESCRIPTION	WELL CONSTRUCTION
(feet)	Sample No.	Sample Blows/ Foot	OVM Reading	NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	DETAILS AND/OR DRILLING REMARK
_			2.5	Interbedded SAND and LIGNITE (SP-0): sand - olive gray, lignite - black, very moist to wet, mostly sand, fine-grained sand	
				LIGNITE (0): black, dry, hard - Lignite to 30.25'	
30-				CLAY (CL): light gray, slighltly moist, hard	Bentonite Grout
			4.3	CLAYEY SAND (SC): very dark grayish-brown, dry, dense, very fine-grained sand, lignite fragments	
- 35- - -				CLAYEY SAND (SC): olive gray, slightly moist to moist, dense, fine-grained sand, weakly cemented, laminated	Bentonite Chips
- - - -			4.9	Slightly CLAYEY SAND (SC): olive gray, moist to very moist, 42.5'-43' wet, moist below 43' and silty, medium dense, very fine- to fine grained sand	- 16/30 Grade Silica Sand
- - - 15-			4.4		2" Schedule 40 PVC Screen 0.010 Slot
-				Very slightly CLAYEY SILTY SAND (SM): olive gray, moist, dense, fine-grained sand, trace of lignite lenses	5.5" End Cap
-			0.6	- Sulfur smell	
50-				Total Depth = 50"	
-				·	
+					
+					
55-					-

ROJE	01.			s, Tex	ons Creek as	Tiant			_		I No. A	
BORIN	G LO	CAT	ION:	West	t of Limesto	one Storage Building		GROUND S	URFAC	E ELEVA	TION AND D	ATUM:
RILLII	NG C	TNC	TRACT	OR:	Best Drill	ling		DATE STAF	RTED:		DATE FIN	ISHED:
				1.16				5/24/16 TOTAL DEF	PTH (ft.)):	5/24/16 SCREEN	INTERVAL (ft.):
RILLII	NG M	ETH	HOD:	HS	SA			35.0			21'-26'	
RILLII	NG E	QUII	PMEN ⁻	Τ:	8 5/8" OD	HSA Truck Mounded Rig		DEPTH TO	WATER	R ATD:	CASING:	
AMPL	ING N	/ΕΤ	HOD:	5	5' x 4" Core	Barrel		LOGGED B Daniel B.		PG	<u> </u>	
IAMME	=R W	FIG	HT·	N/	1	DROP: NA		RESPONSI	BLE PR	OFESSIO	NAL:	REG. NO.
IJ GIVIIVIE					•	DESCRIPTION		Daniel B.	Haug	, P.G.		1773
DEРIН (feet)		41	Blows/ Foot	OVM Reading	NAME (I	USCS): color, moist, % by wt., plast. c cementation, react. w/HCl, geo. i		re,			DETA	CONSTRUCTION AILS AND/OR
	Sa	Sa	面上	<u>~</u>	Surface Ele	vation:					DRILL	ING REMARKS
				-	6" ash							
_					Sandy	clay with few small gravel fill to 2"	,					
=				}	SANDY	CLAY (CH): yellowish-brown, m	noist, stiff. fin	e-				
_						se-grained sand	,,		-		— 2" Diamete	er PVC
_												
_												
5-				ļ		Y SAND (SC): light yellowish-bro	own, moist, s	tiff,				
_					fine-gra	ined sand						
_												
											— Grout	
											Grout	
_					0.5" sar	ndstone lense at 9.25'						
10-					CLAYE	Y SAND (SC): light yellowish-bro	wn sliahtly		-			
_						stiff, fine-grained sand	wii, oligiidiy					
_					sandst	one nodules and 0.5" sand lense	e at 12'-12.5'					
_					- trace o	of ferrous staining						
_												
15-				-	interbe	edded sand and sandy clay						
						Y SAND and SAND (SP, SC) oli	ive-gray, dry	to				
					\	oose to firm		/				
_						CL): brown, dry, hard, with interb	edded sand				Bentonite	
_					and cla		.	_/				
=						SAND (SM): brown, dry, loose to iined sand, clay lenses	tirm,					
20-						CL): yellowish-brown, dry, hard, ined sand lenses, trace of pebbl			-		— 20/40 Gra	de Silica Sand
_				-		Y SAND with sandstone lenses,		7	피			
_				-		fine-grained to small gravels size			1			
=				-	SANDY sand la	∕ CLAY (CL): brown, dry, hard, fii mina	ne-grained				— Cobodiila	40 DVC 0 040
_						SAND (SM): olive gray, moist, loo	ose to firm,		+		Slot Scree	40 PVC 0.010 n
						ined sand				= :: :		

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. AP PZ-1 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION Sample Blows/ Foot DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SILTY SAND (SM): light olive gray, wet, hard, fine-grained sand, very thin lignite seams 6" End Cap CLAY (CH): olive, dry, hard, blocky 30 CLAY (CH): olive, dry, hard, blocky 20/40 Grade Silica Sand 35 Total Depth = 35' 40 45 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

		os, Tex								II NO. A	
BORING LO	CATION:	No	orth of Fly A	sh Silos							
ORILLING C	CONTRACT	TOR:	Best Dril	ling			DATE STA 5/23/16	ARTED:		5/24/16	
DRILLING M	/IETHOD:	HS	SA				TOTAL DE	EPTH (ft.):	SCREEN 34'-39'	INTERVAL (ft.):
DRILLING E	QUIPMEN	T:	8 5/8" OD	HSA 2" Ro	ods		DEPTH TO	O WATE	R ATD:	CASING:	
SAMPLING	METHOD:	5	' x 4" Core	Barrel			LOGGED Daniel E		n P.G		
HAMMER W	/EIGHT:	NA	١	DROP:	NA		RESPONS Daniel E	SIBLE PE	ROFESSI	ONAL:	REG. NO.
DEPTH (feet) Sample Solution No.	Sample Saldws/ Saldws/ Foot	OVM Reading		cementat	DESCRIPTION moist, % by wt., pla ion, react. w/HCl, ge			J. Haug	<u>,, rO.</u>	DET	CONSTRUCTION AILS AND/OR ING REMARKS
S	υш		Surface Ele		dark gray, slightl	v moist. loose.	fine-				
_		-			and, roots, fly ast	-					
_				SANDY CLA grained san	λΥ (CH): brown, r d	noist, firm, fine	- to				
-			SILTY	SANDY CLA	Y (CL): brown, m d, increasing san		to			— 2" Diamet	er PVC
5-				CLAY (CH)): yellowish-browi	n, moist, soft, fi	ne-				
10			hard, fir		NY (CH): yellowish and, ferrous stair						
10					C): light olive brovined sand, wood						
				CLAYEY SA irm, fine-grai	ND (SC): light ye ned sand	llowish-brown,					
				` '): yellowish-browr gnite seam (thin)	n, dry, hard,					
15-				Y SILTY SA ained sand	ND (SM): gray, w	et, firm,				— Grout	
-				CLAY (CH)): light yellowish-b d sand	rown, dry, har	d,				
20-				ist intervals,	Y (CL): light olive hard to very stiff,	-					
25											
	- 4 10//-	l	nvironmen	. 4 0 1 - 4 4 -				D : (1	u - 07004	50060.01.00	WEL

TMPA Gibbons Creek Plant PROJECT: Carlos, Texas Log of Well No. AP PZ-2 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SILTY SAND (SM): light olive brown, very moist, fine-grained sand, soft Sligthly SANDY CLAY (CH): brown, dry, hard, fine-grained sand lenses - increased sand content with depth SILTY SAND (SM): light olive brown, moist, 30 fine-grained sand, firm Bentonite CLAYEY SILTY SAND (SM): light olive gray, very moist, firm, 1/4" lignite seams, fine-grained sand SANDY CLAY (CL): light olive brown, moist to dry, hard, fine-grained sand, very hard lenses, organics 20/40 Grade Silica Sand (wood) in sandstone 35 SILTY SAND (SM): light olive brown, wet to 39', tan lignite lenses (1/4"), fine-grained sand Schedule 40 PVC 0.010 Slot Screen CLAY (CH): brown, moist, hard 6" End Cap 40 Total Depth = 40' 45 50 55 WELL3 Project No. 6706150060.01.006 Page 2 of 2 Amec Foster Wheeler Environment & Infrastructure, Inc.

	Carlo	os, Tex	as	CDOLL	ND SURFACE ELEVA	II No. AP PZ-3
BORING LOC	ATION:	Nor	th of Ash Ponds	GROU	ND SURFACE ELEVA	ATION AND DATOM:
ORILLING CC	NTRACT	OR:	Best Drilling	DATE 5/25/	STARTED: 16	DATE FINISHED: 5/25/16
DRILLING ME	ETHOD:	HS	SA	TOTAL 40.0	DEPTH (ft.):	SCREEN INTERVAL (ft.): 34.5'-39.5
ORILLING EQ	UIPMEN	T:	8 5/8" OD HSA Truck Mounded Rig		TO WATER ATD:	CASING:
SAMPLING M	IETHOD:	5	' x 4" Core Barrel	LOGG	ED BY: el B. Haug, P.G.	
HAMMER WE	EIGHT:	N/	A DROP: NA	RESPO	onsible profession B. Haug, P.G. B. Haug, P.G.	ONAL: REG. NO. 1773
	Sample Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density cementation, react. w/HCl, geo. inter. Surface Elevation:		ar B. Flaug, F. G.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
-			SANDY CLAY with Gravel (CH): yellowish-br moist, very stiff, fine-grained sand, few small probably fill			
5- - - - -			SANDY CLAY (CL): olive brown, moist, very fine-grained sand SANDY CLAY (CL): light olive brown, slightly moist at 9', firm, layered, fine-grained sand			— 2" Diameter PVC
10-		_	SANDY CLAY (CL): light olive brown, moist to above underlying clay, fine-grained sand, loo CLAY (CH): light olive brown, dry, blocky, ha SILTY SAND (SM): light olive brown, wet, fin	se rd, layered		
15-			sand			— Grout
20-			SILTY SAND (SM): light olive brown, wet, fin sand, layered	e-grained		
25			- interbedded sand and siltstone			
	(\ \ A / !		Environment & Infrastructure, Inc.			50060.01.006 Page 1 of 2

TMPA Gibbons Creek Plant PROJECT: Carlos, Texas Log of Well No. AP PZ-3 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, **DETAILS AND/OR** cementation, react. w/HCl, geo. inter. DRILLING REMARKS SILTY SAND (SM): light olive brown, wet, fine-grained sand, hard siltstone at 28.75' to 29' and 1" lense at 27.5' ferrous staining around siltstone lenses 30 SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand Bentonite Sandstone, light to olive brown, wet, hard, platy 32.5'-33' SILTY SAND (SM): light olive brown, wet, loose, 20/40 Grade Silica Sand fine-grained sand Sandstone, pale yellow, wet, hard, platy 34'-34.5 35 SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand Siltstone, olive brown, wet, hard, platy 36.5'-36.75' Schedule 40 PVC 0.010 SILTY SAND (SM): light olive brown, wet, loose to firm, Slot Screen fine-grained sand SILTY SAND (SM): olive gray, wet, firm, fine-grained sand, layered 6" End Cap 40 CLAY (CH): olive gray, dry, hard, blocky Total Depth = 40' 45 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

SAMPLING MET HAMMER WEIG	NTRACT THOD: JIPMEN' ETHOD: GHT:	OR: HS	8 5/8" OD HSA Truck Mounded Rig	DATE STAF 6/2/2016 TOTAL DEF 45.0 DEPTH TO 40 LOGGED B Daniel B. RESPONSI Daniel B.	PTH (ft.): WATER ATD:	DATE FINIS 6/2/2016 SCREEN IN 38.5'-43.5 CASING: NAL: WELL CO	SHED: ITERVAL (ft.): 5' REG. NO. 1773
DRILLING METHODRILLING EQUI SAMPLING METHODRICAL SAMPLING METHODRICAL SAMP HAMMER WEIGHT SAMP ON O	THOD: JIPMEN ETHOD: GHT: PLES	HS T: 5	8 5/8" OD HSA Truck Mounded Rig 5' x 4" Core Barrel A DROP: NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter. Surface Elevation:	6/2/2016 TOTAL DEF 45.0 DEPTH TO 40 LOGGED B Daniel B. RESPONSI Daniel B.	PTH (ft.): WATER ATD: Y: Haug, P.G. BLE PROFESSIO	6/2/2016 SCREEN IN 38.5'-43.5 CASING: NAL: WELL CO	REG. NO. 1773 DNSTRUCTION LS AND/OR
DRILLING EQUI SAMPLING MET HAMMER WEIG SAMP Quadrage SAMP SAMP SAMP SAMP SAMP SAMP SAMP SAMP	JIPMEN' ETHOD: GHT: PLES	T:	8 5/8" OD HSA Truck Mounded Rig 5' x 4" Core Barrel A DROP: NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter. Surface Elevation:	45.0 DEPTH TO 40 LOGGED B Daniel B. RESPONSI Daniel B.	WATER ATD: Y: Haug, P.G. BLE PROFESSIO	38.5'-43.5 CASING: NAL: WELL CO	REG. NO. 1773 DINSTRUCTION LS AND/OR
SAMPLING MET HAMMER WEIG SAMP (teet) No. Samble No. Samble	GHT:	NA	DROP: NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, seementation, react. w/HCl, geo. inter. Surface Elevation:	40 LOGGED B Daniel B. RESPONSI Daniel B.	Y: Haug, P.G. BLE PROFESSIO	NAL: WELL CC	1773 DNSTRUCTION LS AND/OR
HAMMER WEIGHAMPIER	GHT: PLES	N/	DROP: NA DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter. Surface Elevation:	Daniel B. RESPONSI Daniel B.	Haug, P.G. BLE PROFESSIO	WELL CC	1773 DNSTRUCTION LS AND/OR
Sample (feet) No. Sample Samp	PLES		DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter. Surface Elevation:	Daniel B.		WELL CC	1773 DNSTRUCTION LS AND/OR
DEPTH		OVM Reading	NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter. Surface Elevation:	structure,		DETAI	LS AND/OR
5-	BIO BIO FG	Re				DRILLIN	IG REMARKS
10-			Clay and gravel fill to 3'				
10-			OANDY OLAY (OL) Pala alla dalla da la company	1		- 2" Diameter	PVC
10-			SANDY CLAY (CL): light yellowish-brown, mois fine-grained sand	st, Sun,			
-			Interbedded sandstone and SANDY CLAY (CL yellowish-brown, moist, hard, fine-grained sand				
-			SANDY CLAY (CL): light yellowish-brown, mois fine-grained sand, ferrous partings	st, stiff,			
15-			SANDY CLAY (CL): light yellowish-brown, mois 14.5', hard to 15', fine-grained sand, ferrous stareddish-brown with increased clay content at 14	aining,			
-			SANDY CLAY (CL): olive brown, dry, hard, very fine-grained sand, discontinous silt and sand pa	· I		- Grout	
20-			SANDY CLAY (CL): olive brown, dry, very stiff, fine-grained sand				
25		_	Lignite, black, dry, hard 23.5'-25' - 2" sand and clay lenses				

TMPA Gibbons Creek Plant PROJECT: Carlos, Texas Log of Well No. AP PZ-4 (cont'd) SAMPLES WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, **DETAILS AND/OR** cementation, react. w/HCl, geo. inter. DRILLING REMARKS Lignite, dark brown and black, dry, stiff, few interbedded ironstone, sand, clay (thin beds-large majority lignite 25'-30') 30 Sandstone: olive brown, moist, hard Lignite, brown to dark brown, dry, stiff 31'-32.75' Interbedded olive brown sand, brown clay and lignite Bentonite Lignite, brown to dark brown, dry, stiff, platy 33'-35' 35 Lignite, brown to dark brown, dry, stiff, blocky 35'-36' Interbedded sandy clay, lignite (thin beds), medium gray sand, fine-grained sand, dark brown clay and 20/40 Grade Silica Sand lignite Lignite, brown to dark brown, dry, stiff, blocky 39'-40' ∇ 40 Sand interbedded with lighnite, black, wet, loose, fineto medium-grained Schedule 40 PVC 0.010 Lignite, black dry, very stiff 41'-41.75 Slot Screen SANDY SILT (ML): olive gray, slightly moist, stiff, very fine-grained sand 6" End Cap 45 Total Depth = 45' 50 55 WELL3

Project No. 6706150060.01.006 Page 2 of 2

Amec Foster Wheeler Environment & Infrastructure, Inc.

	Carl	os, Tex	as	CDO			No. SFL MW-2
ORING LO	CATION:	Sc	outh Side of Landfill F, West of Outfall	269'	UND S	URFACE ELEVA	TION AND DATUM:
RILLING C	ONTRAC	TOR:	Vortex Drilling		STAR	RTED:	DATE FINISHED:
				3/16		PTH (ft.):	3/16/16 SCREEN INTERVAL (ft.):
RILLING M	METHOD:	HS	SA	50.0)	, ,	16'-21'
RILLING E	QUIPMEN	IT:	4 1/4 ID HSA (8" Borehole)	DEP ⁻		WATER ATD:	CASING:
AMPLING I	METHOD	5	Split Spoon	LOG	GED B	_{Y:} Haug, P.G.	
	/CICUT:	N/	A DROD: NA			BLE PROFESSIO	NAL: REG. NO.
IAMMER W				Dan	iel B.	Haug, P.G.	1773
(feet) Sample No.	Sample SandW SandW SandW SandW Sand Sand Sand Sand Sand Sand Sand Sand	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. cementation, react. w/HCl, geo.				WELL CONSTRUCTION DETAILS AND/OR
	Sample Blows/ Foot	Re C	Surface Elevation: NA				DRILLING REMARKS
			CLAY CH): dark gray, moist, soft, grad	ling to			
4	1/1/4	0.0	yellowish-brown at 2'				- Concrete
		0.0					
			CLAVEV SILTV SAND (SM SC). II-L4	vollowich brown			
7	3/7		CLAYEY SILTY SAND (SM-SC): light dry, hard, platy, fine-grained sand	yellowish-blowil,			8" Diameter PVC
4	50/1"	0.0	J,, F J, G			-	
5-							
3			SANDY SILT (ML): pale yellow, moist,	hard, very			
-	50/1"		fine-grained sand				
4							
		3.0	SILT (ML): pale yellow, moist, hard, ve	rv fine-grained			Bentonite
			sand	, , ,			— bentonite
-	50/5"						
10	50/5	3.0				- 4	
	04/05		SILT (ML): pale yellow, moist to wet, has fine-grained sand	ard, very			
	21/35	0.8	ilite-grained sand				
-							
_			SANDY SILT (ML): pale yellow, moist				
	11/		to 13', then very moist, siltier-a trace of	clay			
	11/ 24/ 3/	5.0	(unconsolidated)				
15-			SILTY SAND (SM): light yellowish-brow	wn, moist, hard.		 	- 12/20 Grade Sand
4	30/		unconsolidated, very fine- to fine-grain				
	50/2"	4.3	iron oxide staining				
			OIL TVOAND (OLD) II VI III VIII VIII VIII VIII VIII VI				
+			SILTY SAND (SM): light yellowish-brown hard, unconsolidated, very fine- to fine				- 0.010 Slot Sobodulo 40
4	19/		iron oxide staining 19-20'	granica sana,			0.010 Slot Schedule 40PVC
20-	19/ 31/ 32	3.8					-
207			SANDY SILTY (SM): light yellowish-bro				
+	20/ 50/4"	3.9	unconsolidated, hard, iron oxide stainir	ng			— 5.5" End Cap
4			SILTY CLAY (CL): brown, dry, hard				
	,,,		at 22.25 SANDY SILTY CLAY (CL): da	ark gray, dry,	$\overline{\Box}$		
7	60/6"		hard, bedding planes SANDY SILTY CLAY (CL): dark gray,	dry hard	/		
+		2.3	bedding	ه، پر باندانی, /	/	\ ////	
	1 1	1				1/////	

PROJECT: TMPA Gibbons Creek Plant

Carlos, Texas

Amec Foster Wheeler Environment & Infrastructure, Inc.

Log of Well No. SFL MW-2 (cont'd)

Project No. 6706150060.01.006 Page 2 of 2

	MPLES	ĕiñ	DESCRIPTION	WELL CONSTRUCTION
(feet) Sample No.	Sample Blows/ Foot	OVM Reading	NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	DETAILS AND/OR DRILLING REMARKS
	20/ 50/5"	3.7	CLAY (CH): dark gray, dry, hard, lenses of sandy clay, fine-grained sand SANDY CLAY (CL): olive gray, moist (clayey interval, dry), hard, fine-grained sand	
_	15/ 21/ 37	3.2	SANDY CLAY (CL): olive gray, dry, hard, fine-grained sand	
30-	15/ 21/ 21	2.0	Slightly SANDY CLAY (CL): dark gray, dry, hard, fine-grained sand	
	12/ 29/ 40	2.5	SILTY CLAY (CH): dark gray, dry, hard, thin linear structures in the clay	
35-	20/20 60/6"	2.0	SILTY CLAY (CH): olive gray, dry, hard, silt lenses at 35.5', moist	Bentonite
_	10/ 17/ 17	1.1	SILTY CLAY (CH): olive gray, dry, hard, silt lenses <1/4, thin, dry	De norme
40-	10/ 11/ 15		SILTY CLAY (CH): olive gray, moist, firm to hard, few silt partings	
_	8/ 12/ 15		SILTY CLAY (CH): olive gray, moist, firm to hard, few silt partings, one pyrite nodule	
45 -	12/ 12/ 17	2.1	CLAY (CH): olive gray, moist, firm to hard, silt partings	
-	10/ 12/ 31	2.2	CLAY (CH): olive gray, moist, firm to hard, few silt partings	
50 - -		_	Total Depth = 50'	
-				
55				1-

PROJE			los, Tex	ons Creek Plant as		og of Well		
BORIN	G LO	CATION:	Sout	heast of Landfill F	GROUND	SURFACE ELEVA	TION AND D	ATUM:
DRILLI	NG C	ONTRAC	TOR:	Best Drilling	DATE STA 5/31/16		DATE FINI 5/31/16	
DRILLI	NG M	ETHOD:	CI	ME 75 HSA (Buggy Rig)	25.0	EPTH (ft.):	19.5'-24	NTERVAL (ft.): .5'
DRILLI	NG E	QUIPMEI	NT:	CME 75 8 5/8" OD HSA	22	O WATER ATD:	CASING:	
SAMPL	ING N	NETHOD	: {	5' x 4" Core Barrel	LOGGED Daniel E	B. Haug, P.G.		
HAMMI		EIGHT:	N/	A DROP: NA		SIBLE PROFESSIO B. Haug, P.G.	NAL:	REG. NO 1773
DEPTH (feet)		Sample Sandle Blows/ Foot	OVM	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density cementation, react. w/HCl, geo. inter.	, structure,			ONSTRUCTION
	San	San	Re C	Surface Elevation:		1	DRILLI	NG REMARKS
- -				SILTY SAND (SM): light yellowish-brown, mo fine-grained sand, trace ferrous staining	ist, loose,		– 2" Diamete	er PVC
5- - -	-			SANDY CLAY (CH): brown mottled with blackish-brown, moist, firm, fine-grained sand ferrous staining SANDY CLAY (CH): brown, mottled, moist, fi fine-grained sand			– Grout	
10-				SANDY CLAY (CL): yellowish-brown, slightly fine-grained sand, bedding planes, stiff Slightly SANDY SILTY CLAY (CL): yellowish-slightly moist, very firm, fine-grained sand				
- 15- - -				SANDY SILTY CLAY (CL): yellowish-brown, smoist, stiff, very fine-grained sand, few beddir	• .		Bentonite20/40 Grad	de Silica Sand
20-	-			Interbedded sandy clay and sandstone, reddinard to very stiff, fine-grained sand	ish-brown,			
-	-			SILTY SAND (SM): light olive brown, wet, loo fine-grained sand	ose to firm,		Slot Screen	10 PVC 0.010 1
25-				CLAY (CL): light to olive green, dry, hard			− 6" End Cap)
	-			Total Depth = 25'				

BORIN	IG LO	CATION	- <u></u> 1: Sn	uth of La	ndfill F			GROUND	SURFAC	E ELEVA	TION AND D	ATUM:
								DATE STA	RTED:		DATE FIN	ISHED:
DRILLI	ING C	ONTRA	CTOR:	Best	Drilling			5/31/16			5/31/16	
DRILLI	ING M	ETHOE):	CME 75 H	HSA			TOTAL DE 40.0	PTH (ft.)	:	34.5'-39	INTERVAL (ft.):
וווחח	INC E	QUIPM	ENIT:	CME	75 8 5/8" OD H	۹۸		DEPTH TO	WATER	R ATD:	CASING:	
DRILLI	IING L	QUIFIVI	LINI.	CIVIL 1	73 0 3/0 OD 11	<u> </u>		36 LOGGED E	DV:			
SAMPL	LING I	METHO	D:	5' x 4" C	Core Barrel			Daniel B		, P.G.		
HAMM	IER W	EIGHT:	ı	NA	DROP:	NA		RESPONS Daniel B			NAL:	REG. NO. 1773
DEPTH (feet)	Sample No.	Sample Malana Blows/	Foot OVM	NA	cementati	DESCRIPTION moist, % by wt., plast. de ion, react. w/HCl, geo. in	ensity, struct ter.		. Haug	, r .O.	DETA	CONSTRUCTION AILS AND/OR ING REMARKS
<u> </u>	S	SS		Carrao	e Elevation:					NX.	DRILL	ING KEWAKKS
_				1	.AYEY SAND (SC e-grained sand	C): medium gray, mois	st, firm,					
_				Inte	erbedded silty sa	nd and sandstone, mand fine-grained	edium gray	y ,				
-				CL	•	ND (SC-SM): mediun	n gray, slig	hty			– 2" Diamet	er PVC
_						: light olive brown, dry	, hard					
5-				1	e-grained sand, fe		, riai a,					
-	-			SA	NDY SILTY CLA	Y (CL): light olive bro	wn, slightly	,				
-				mc	oist, very fine-grain	ned sand						
10- - - -				1		Y (CL): light olive bro ned sand, minor ferro						
15- - -	_			1	NDY SILTY CLA	NY (CL): brown, dry, vo e-grained sand	ery stiff,				- Grout	
20-				bed Lig	dding planes, trac nite lense, dark g	: dark olive brown, dry ce of gypsum, fine-gra gray to balck, loose to light olive gray, slight	ained sand firm					
- -						pedding planes, firm	y most,					
25-									_XX	XX		WE

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. SFL MW-4 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION Blows/ Foot NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SILTY SAND (SM): light olive gray, dry, very fine-grained sand, 25'-26' interbedded siltstone Grout CLAYEY SANDY SILT (ML): dark gray, dry, fine-grained sand, discontinous thin sand lenses 30 SANDY SILTY CLAY (CL): dark gray, dry, very fine-grained sand, discontinuous thin silt lenses Bentonite 20/40 Grade Silica Sand 35 Interbedded clay and sand; clay, black, dry, hard; sand, ∇ olive gray, dry, loose, very fine-grained sand SAND (SP): olive gray, wet, loose, very fine-grained Schedule 40 PVC 0.010 sand Slot Screen SILTY SAND (SM): olive gray, dry, firm, fine-grained sand 6" End Cap 40 Total Depth = 40' 45 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

ROJECT: TMPA Gib Carlos, Te	bons Creek Plant exas	Log of Well	No. SFL MW-5
ORING LOCATION: Lan	dfill F	GROUND SURFACE ELEV	ATION AND DATUM:
RILLING CONTRACTOR:	Best Drilling	DATE STARTED: 5/23/16	DATE FINISHED: 5/23/16
RILLING METHOD: H	SA	TOTAL DEPTH (ft.): 25.0	SCREEN INTERVAL (ft.): 16'-21'
RILLING EQUIPMENT:	8 5/8" OD HSA 2" Rods	DEPTH TO WATER ATD: 16	CASING:
AMPLING METHOD:	5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.	
AMMER WEIGHT:	A DROP: NA	RESPONSIBLE PROFESSI Daniel B. Haug, P.G.	ONAL: REG. NO. 1773
SAMPLES	DESCRIPTION		WELL CONSTRUCTION
Sample No. Sample Sampl	NAME (USCS): color, moist, % by wt., plast. density, str cementation, react. w/HCl, geo. inter.	ucture,	DETAILS AND/OR
	Surface Elevation:		DRILLING REMARKS
	SILTY SAND (SM): dark grayish-brown, moist, lo fine-grained sand, roots	ose,	
	SANDY CLAY (CH): dark yellowish-brown, moist	, soft,	
_	fine-grained sand, roots		— 2" Diameter PVC
_	SILTY SANDY CLAY (CL): yellowish-brown, dark yellowish-brown lenses, moist, fine-grained sand		-
5-	SILTY SANDY CLAY (CL): yellowish-brown, dry,		Grout
_	very fine-grained sand, ferrous staining		
-	SILTY SAND (SM): light brownish-gray, mottled was brownish-yellow, soft, moist (slightly) increasing content to 8.5', fine-grained sand		
	Slightly CLAYEY SILTY SAND (SM): light olive be	rown,	
10-	loose, moist, fine-grained sand Slightly CLAYEY SILTY SAND (SM): light olive be	rown.	
-	slightly firm, moist, trace of pebbles		Doutouite
			— Bentonite
15-	SILTY SAND (SM): light olive brown, wet to very	moist	— 20/40 Grade Silica Sand
-	firm, faint stratification, fine-grained sand		
-			
			— Schedule 40 PVC 0.010
	SANDSTONE (SS): light yellowish-brown, dry, ha	ard,	Slot Screen
20-	ferrous staining along fractures, layered		
7	Shale (SILTY CLAY) (CL): gray, dry, hard, very		— 6" End Cap
	fine-grained sand, silt partings		
25			
	Total Depth = 25'		
			WE

	arlos, Tex	ons Creek Plant as	Log of Well	No. SFL MW-6
BORING LOCATIO	N: Sou	thwest Corner of Landfill	GROUND SURFACE ELEVA	TION AND DATUM:
DRILLING CONTRA	ACTOR:	Best Drilling	DATE STARTED: 5/23/16	DATE FINISHED: 5/23/16
DRILLING METHO	D: HS	SA	TOTAL DEPTH (ft.): 20.0	SCREEN INTERVAL (ft.): 14.5'-19.5
DRILLING EQUIPM	MENT:	8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 15	CASING:
SAMPLING METHO	OD: 5	' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.	
HAMMER WEIGHT	T: NA	A DROP: NA	RESPONSIBLE PROFESSION Daniel B. Haug, P.G.	DNAL: REG. NO. 1773
(feet) (feet) sample No. sample Sample Slows/		DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, s cementation, react. w/HCl, geo. inter.	structure,	WELL CONSTRUCTION DETAILS AND/OR
DEPTH (feet) Sample No. Sample Blows/	P. C. S.	Surface Elevation:		DRILLING REMARKS
- - - -		Sandy Clay fill, few gravel fill to 4.5'		— 2" Diameter PVC — Grout
5-		SANDY SILTY CLAY (CL): pale brown, dry, ha gray partings, very fine-grained sand	rd, dark	
10-		CLAYEY SAND SILT (ML): pale brown, dry, ve hard, dark gray clay partings, fine-grained sand increased ferrous staining after 8', few sand pa wood fragments in a few partings SILTY SANDY CLAY (CH): pale brown, dry, ha brown partings to reddish-brown, fine-grained s	rtings,	— Bentonite
15-		ferrous staining Layered SILTY SAND (SM) and SANDY SILTY		— 20/40 Grade Silica Sand
		(CL): pale brown, some brown layers after 17', moist to dry, fine-grained sand	1 1	Schedule 40 PVC 0.010 Slot Screen
20-		SANDY SILTY CLAY (CL): gray silt and sand, or gray clay, layered, dry, hard, very fine sand	dark	─ 6" End Cap
		Total Depth = 20'		

Carl	los, Tex	ons Creek Plant as	Log of Well	No. SFL MW-7
BORING LOCATION:	Sou	theast Side of Landfill F	GROUND SURFACE ELEV	ATION AND DATUM:
DRILLING CONTRAC	TOR:	Tolunay-Wong	DATE STARTED: 5/2/17	DATE FINISHED: 5/3/17
DRILLING METHOD:	Н	SA with Continous Core Barell	TOTAL DEPTH (ft.): 55.0 DEPTH TO WATER ATD:	SCREEN INTERVAL (ft.): 50'-55' CASING:
DRILLING EQUIPMEN	NT:	CME 75	-	CASING.
SAMPLING METHOD:	: 5	5' x 4.25" OD Core Barrel	LOGGED BY: Daniel B. Haug, P.G.	DEO NO
HAMMER WEIGHT:	N/	A DROP: NA	RESPONSIBLE PROFESSION Daniel B. Haug, P.G.	ONAL: REG. NO 1773
Ceet) Sample No. Sample Sample Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, struct cementation, react. w/HCl, geo. inter.	ure,	WELL CONSTRUCTIO DETAILS AND/OR
Sar Sar Blc	. 28	Surface Elevation:		DRILLING REMARKS
- - - -	2.6	Grass at surface SILTY SAND (SM): yellowish-brown, dry, firm, very fine-grained sand (fill)		
5	1.1	SANDY CLAY (CH): gray, slightly moist, firm, very fine-grained sand		— 8" Diameter PVC
- - - - 15- -	0.8	SANDY CLAY (CH): brown, slightly moist to moist, olive gray mottling and some ferrous staining, very fine-grained sand, fill to approximately 12' SANDY CLAY (CL): brown, slightly moist, very fine-grained sand, some lammination, couple of thin greenish-gray sand lenses CLAY (CL): dark brown, slightly moist, very fine-grained sand intervals (thin)		
20-	0.4	SANDY CLAY (CL) with lignite fragments: very dark brown, hard, very fine-grained sand, slightly moist to Layered sand and clay with lignite 19.5'-20', very d brown to light gray, hard, slightly moist, pyrite nodule CLAY (CH): very dark gray, dry, hard, very thin sand lenses, greenish-gray, lignite fragments along beddiplanes, platy	o dry Jark es	— Bentonite Grout
25-		CLAY (CH) with interbedded thin sand lenses: very dark gray, dry, hard, very fine-grained sand, lignite		
30	0.4	fragments along bedding planes in the clay, clay bre along horizontal laminae, platy	eaks	

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas

Log of Well No. SFL MW-7 (cont'd)

(feet)	Sample M	Foot Sa	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
-			0.3	CLAY (CL): with numerous thin sand lenses interbedded with clay: very dark gray clay, greenish-gray sand, dry, hard, lignite fragments along bedding planes in the clay, very fine-grained sand, platy	2" Schedule 40 PVC Riser
35-			0.3	CLAY (CH): with sand partings: very dark gray, dry, hard, very fine-grained sand, lignite fragments along bedding planes in the clay, platy, sand greenish-gray	
40-			0.2	CLAY (CH) with SAND partings: very dark gray, dry, hard, very fine-grained sand, lignite fragmenst along bedding planes in the clay, platy, sand greenish-gray	Bentonite Chips
45-			0.2	SAND (SP): olive gray, wet, loose, fine- to very fine-grained sand CLAY (CH): dark greenish-gray, dry to hard at 46' CLAY (CH): very dark gray, dry, hard, platy	16/30 Grade Sand
50-			0.2	SILTY SAND (SM): dark gray, wet, loose, very fine- to fine-grained sand Interbedded SAND (SP) and lignite: olive gray, wet, loost to firm 2" lignite seam SAND (SP) with thin lignite lenses, olive gray, wet,	2" Schedule 40 PVC Screen 0.010 Slot
55 – –				loose to firm Total Depth = 55'	5.5" End Cap
- 60- -					
- - - 65-					
1					-

	. Gibbons Creek s, Texas	Plant	Lo	g of Well N	o. SSP/A	AP MW-1
	North of Sludge	Pond	GROUN	D SURFACE ELEVA	TION AND DA	TUM:
DRILLING CONTRACTO	PR: Best Dril	ling	DATE S' 5/25/10	TARTED:	DATE FINIS 5/26/16	SHED:
DRILLING METHOD:	HSA		TOTAL (40.0	DEPTH (ft.):		ITERVAL (ft.): 5'
DRILLING EQUIPMENT:	8 5/8" OD	HSA Truck Mounded Rig	30	TO WATER ATD:	CASING:	
SAMPLING METHOD:	5' x 4" Core	Barrel	LOGGEI Daniel	B. Haug, P.G.		
HAMMER WEIGHT:	NA	DROP: NA		NSIBLE PROFESSIO B. Haug, P.G.	NAL:	REG. NO. 1773
DEPTH (feet) Sample No. Sample Blows/ Foot		DESCRIPTION USCS): color, moist, % by wt., plast. densementation, react. w/HCl, geo. inter	sity, structure,		DETAI	ONSTRUCTION LS AND/OR IG REMARKS
_ w w m	00.1000 2.0	vation: nd, fly ash and sandy clay, fill to 3.5'			DIVILLIA	O I (LIVI) II II (O
- - - -	I	CLAY (CL): light yellowish-brown, e-grained sand	moist, very		— 2" Diameter	PVC
5-	SILT (N	AL): yellowish-red, moist, firm to hard to clay, yellowish-red, moist, hard	d, after 3"			
-		CLAY (CL): reddish-brown, moist, ined sand	very stiff,			
10-	1 -	SANDY CLAY (CH): reddish-browr ry fine-grained sand	n, moist, very			
15-	Lignite,	black, dry, hard 12'-16'			— Grout	
- - - -	1 -	SANDY CLAY (CH): dark grayish-bery fine-grained sand	orown, dry,			
20-	fine-gra	CLAY (CL): dark grayish-brown, mained sand, lithofied sandy lenses frondier and softer toward 25', platy wh	om 20.5' to			
25						WELL3
Amec Foster Whe	eler Environmer	nt & Infrastructure, Inc.		Project No. 67061	50060.01.006	Page 1 of 2

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. SSP/AP MW-1 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SILTY SAND (SM): dark olive brown, slightly moist, hard, platy when hard, fine-grained sand Bentonite 20/40 Grade Silica Sand ∇ 30 Slightly SILTY SAND (SM): dark olive brown, wet, loose, fine-grained sand Schedule 40 PVC 0.010 35 Slot Screen CLAYEY SILTY SAND (SM-SC): dark olive brown, dry to moist, fine-grained sand, firm 6" End Cap 40 Total Depth = 40' 45 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

	. Gibbons Creek s, Texas	Plant		Log	g of Well	No. SSP	MW-2
BORING LOCATION:	West of Center	of Scrubber Sludge Pone		GROUND S	URFACE ELEVA	TION AND DA	TUM:
DRILLING CONTRACTO	DR: Best Dril	ling		DATE STAR 6/2/06	RTED:	DATE FINIS	SHED:
DRILLING METHOD:	CME 75 HSA			TOTAL DEP	PTH (ft.):		TERVAL (ft.):
DRILLING EQUIPMENT:	CME 75 8	5/8" OD HSA			WATER ATD:	CASING:	
SAMPLING METHOD:	5' x 4" Core	Barrel		LOGGED B	_{Y:} Haug, P.G.	-	
HAMMER WEIGHT:	NA	DROP: NA		RESPONSIE	BLE PROFESSIO Haug, P.G.	NAL:	REG. NO. 1773
Ceet) Sample No. Sample Blows/ Foot	NAME (DESCRIPTION USCS): color, moist, % by wt., pla- cementation, react. w/HCl, ge- vation:	st. density, struct o. inter.		J	DETAI	INSTRUCTION LS AND/OR G REMARKS
0, 0,		black, loose					
- - -		CLAY (CL): yellowish-brown ined sand, few pebbles	, moist, firm,			– 2" Diameter	PVC
5- - - -	fine-gra	CLAY (CL): medium gray, mined sand, few pebbles CLAY (CL): brown, moist, firew small gravel		ı			
10-	firm to gravel,	CLAY (CH) with small gravel stiff, fine-grained sand with pe clay clasts, some red and gre- ng, trace yellow nodules	bbles and sma	I			
15- - - -		'SILTY CLAY (CL): brown, m ined sand, trace roots, few be				– Grout	
20-	fine-gra	SAND (SM): light olive brown, ined sand, bedding planes, b very thin					
Amac Foster Whee	olor Environmer	at & Infractructure Inc			roiget No. 670645	50060 01 006	WELL3
Amec Foster Whe	eiei Environiner	t & Infrastructure, Inc.			roject No. 670615	0000.07.006 1	rage 1 of 2

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. SSP MW-2 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION Sample Blows/ Foot DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS CLAYEY SILTY SAND (SC-SM): light olive brown, moist, firm, fine-grained sand 30 Grout SILTY SAND (SM): light olive brown, wet, 30'-33', sandstone at 33', fine-grained sand Slightly SILTY SAND (SM): light olive brown, slightly moist, firm, fine-grained sand Bentonite 35 20/40 Grade Silica Sand T 40 SANDY CLAY (CH) with few gravel: reddish-brown, wet, firm Schedule 40 PVC 0.010 Slot Screen SANDY CLAY (CH): dark olive brown, moist, stiff, fine-grained sand 6" End Cap CLAYEY SILTY SAND (SM-SC): dark olive brown, dry, 45 dense, fine-grained sand Total Depth = 45' 50 55 WELL3 Project No. 6706150060.01.006 Page 2 of 2 Amec Foster Wheeler Environment & Infrastructure, Inc.

PROJE			los, Tex	oons Creek Plant xas	<u> </u> L	og of Well	NO. 551	P IMW-3	
BORIN	G LO	CATION:	Sout	hwest Corner of Scrubber Sludge Pond	GROUNI	D SURFACE ELEVA	TION AND D	ATUM:	
DRILLI	NG C	ONTRAC	CTOR:	Best Drilling	DATE ST 6/3/16	ΓARTED:	DATE FINI 6/3/16	SHED:	
DRILLI	NG MI	ETHOD:	CI	ME 75 HSA	45.0	DEPTH (ft.):	SCREEN INTERVAL (ft.): 39.5'-44.5'		
DRILLI	NG E	QUIPME	NT:	CME 75 8 5/8" OD HSA	DEPTH 1	TO WATER ATD:	CASING:		
SAMPL	ING N	METHOD): {	5' x 4" Core Barrel	LOGGED Daniel	B. Haug, P.G.			
HAMM	ER WI	EIGHT:	N/	DROP: NA		ISIBLE PROFESSIO B. Haug, P.G.	NAL:	REG. NO.	
DEPTH (feet)		Sample Sandle Blows/	OVM	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. densit cementation, react. w/HCl, geo. inter.	y, structure,			ONSTRUCTION	
	San	San		Surface Elevation:			DRILLI	NG REMARKS	
- - -				Gravelly sandy clay at surface to 1.5' SANDY CLAY (CL): yellowish-brown, moist, fine-grained sand	stiff,		− 2" Diamete	er PVC	
5- - - -				SANDY CLAY (CL) with gravel: yellowish-broatiff, fine-grained sand	own, moist,				
10- - -				CLAY and SANDY CLAY (CL-CH): yellowish reddish-brown, reddish-gray layers (fill), mois fine-grained sand					
_				Probably fill above 14'					
15- - -				Slightly SANDY CLAY (CH): olive gray to 17 stiff, fine-grained sand	.5', moist,		- Grout		
-	_			SANDY CLAY (CL): reddish-yellow, moist, s fine-grained sand	tiff,				
20-	-			SANDY CLAY (CL): light reddish-brown, dry fine-grained sand	, stiff,				
25-									
_5			heeler I					WE	

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas Log of Well No. SSP MW-3 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. **DETAILS AND/OR** DRILLING REMARKS SANDY CLAY (CL): light brown, dry, hard Grout Sandstone, light brown, dry, hard 29.5'-30' 30 1" of sandstone in core barrel, loose, fine-grained wet sand washed out of core barrel Bentonite 35 SILTY SAND (SM): light olive brown, wet, soft, fine-grained sand 20/40 Grade Silica Sand 40 SILTY SAND (SM): light olive brown, wet, soft, fine-grained sand Schedule 40 PVC 0.010 1" lignite seam, brown, wet, soft at 41.75, very thin Slot Screen lignite lenses at 42' and 43.5' 6" End Cap SILTY SAND (SM): light olive brown, wet, stiff, 45 fine-grained sand Total Depth = 45' 50 55 WELL3 Amec Foster Wheeler Environment & Infrastructure, Inc. Project No. 6706150060.01.006 Page 2 of 2

PROJE				s, Tex	ons Creek Plant as			Log of Well No. SSP MW-4						
BORIN	IG LO	CATIO	N:	Soutl	heast Corner of Scrubber Sludge Pond	GROUNE	SURFACE ELEVA	TION AND DA	ATUM:					
DRILLI	NG C	ONTRA	ACTO	DR:	Best Drilling	DATE ST 6/3/16	ARTED:	DATE FINI 6/3/16	SHED:					
DRILLI	NG M	ETHO	D:	CN	NE 75 HSA	50.0	DEPTH (ft.):	43'-48'	NTERVAL (ft.):					
DRILLI	NG E	QUIPM	ENT	:	CME 75 8 5/8" OD HSA	DEPTH T 44.75	O WATER ATD:	CASING:						
SAMPL	_ING N	METHC	D:	5	5' x 4" Core Barrel	LOGGED Daniel	B. Haug, P.G.							
HAMM	ER W	EIGHT	:	NA	A DROP: NA		ISIBLE PROFESSIC B. Haug, P.G.	NAL:	REG. NO. 1773					
DEPTH (feet)		Sample Management Blows/		OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density cementation, react. w/HCl, geo. inter.	y, structure,			ONSTRUCTION					
	San	Sar	요	- % O	Surface Elevation:			DRILLI	NG REMARKS					
- - - - 5-					Sand, gravel, clay fill SANDY CLAY (CH): layered yellowish-brown stiff, fine-grained sand, probable fill SANDY CLAY - CLAYEY SAND (CH-SC): bi			– 2" Diamete	er PVC					
- - - 10- -	-				moist, firm, fine-grained sand, probable fill SANDY CLAY (CH): brown and olive brown (fill); moist, stiff, fine-grained sand									
-	-				Probably fill above 14'									
15- - - -	-				SANDY CLAY (CL): yellowish-brown, moist, fine-grained sand, black organic streaks	firm,		– Grout						
20-					SANDY CLAY (CH): yellowish-red, very mois fine-grained sand, soft	t,								
_					CLAY (CH): dark reddish-brown, moist, firm									
_					Lignite, black, moist, firm 22.5'-23'									
_	-				SANDY CLAY (CL): light yellowish-brown, mine-grained sand	oist, stiff,								
25-									WE					

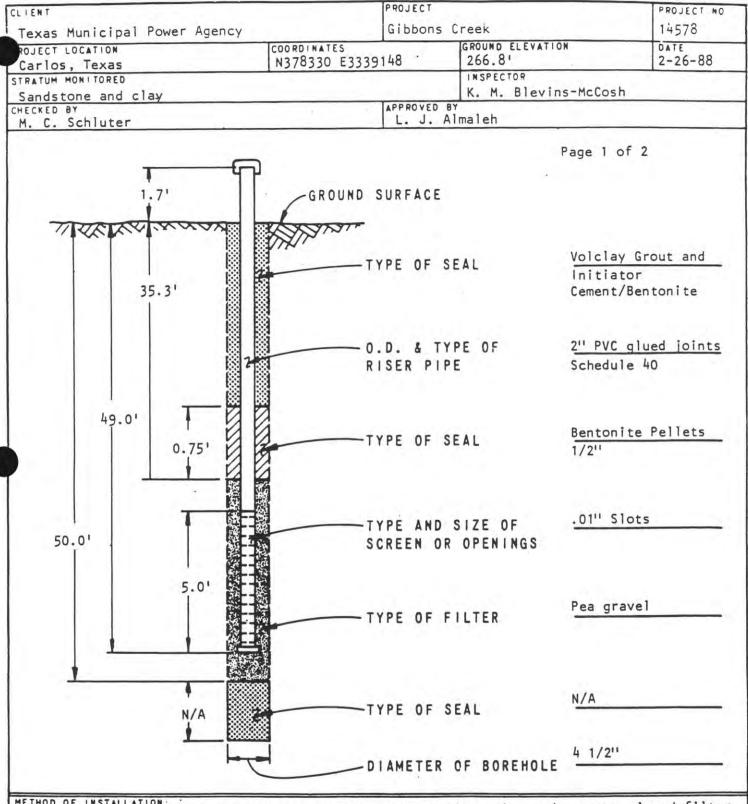
TMPA Gibbons Creek Plant PROJECT: Carlos, Texas Log of Well No. SSP MW-4 (cont'd) SAMPLES OVM Reading WELL CONSTRUCTION DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, **DETAILS AND/OR** cementation, react. w/HCl, geo. inter. DRILLING REMARKS SANDY CLAY (CL): light yellowish-brown, moist, very stiff, fine-grained sand, ferrous streaks 30 Grout SANDY CLAY (CL): light yellowish-brown, moist, vey stiff, fine-grained sand, ferrous streaks 35 Lignite, black, moist, firm 34.75'-35.25' SANDY CLAY (CL): dark grayish-brown, dry, hard, fine-grained sand Lignite, dark brown, dry, hard 38.25'-38.75 Bentonite SANDY CLAY (CL): dark grayish-brown, dry, hard, fine-grained sand, interbedded black clay lenses 40 Interbedded sand and clay to 44.75'; CLAY (CH): black, dry, hard and; SAND (SP): olive gray, dry, dense 20/40 Grade Silica Sand SAND (SP): olive gray, moist, dense, fine-grained sand, ∇ wet 45 Schedule 40 PVC 0.010 Slot Screen SANDY CLAY (CL): dark gray, moist, wet at 45'-46' (sandier interval), moist to dry below 46', hard, fine-grained sand 6" End Cap 50 Total Depth = 50' 55

WELL3

Amec Foster Wheeler Environment & Infrastructure, Inc.

Project No. 6706150060.01.006 Page 2 of 2

PIEZOMETER NO. B-11



Boring drilled to completion; set riser pipe and screen; placed filter and seal; grouted to surface; poured surface pad

pellets for seal but only 9" arrived at 35'- rest hung up-didn't have any more bentonite developed well on 2-27-88 by flushing w/clean water for 3 minutes and blowing it out w/air

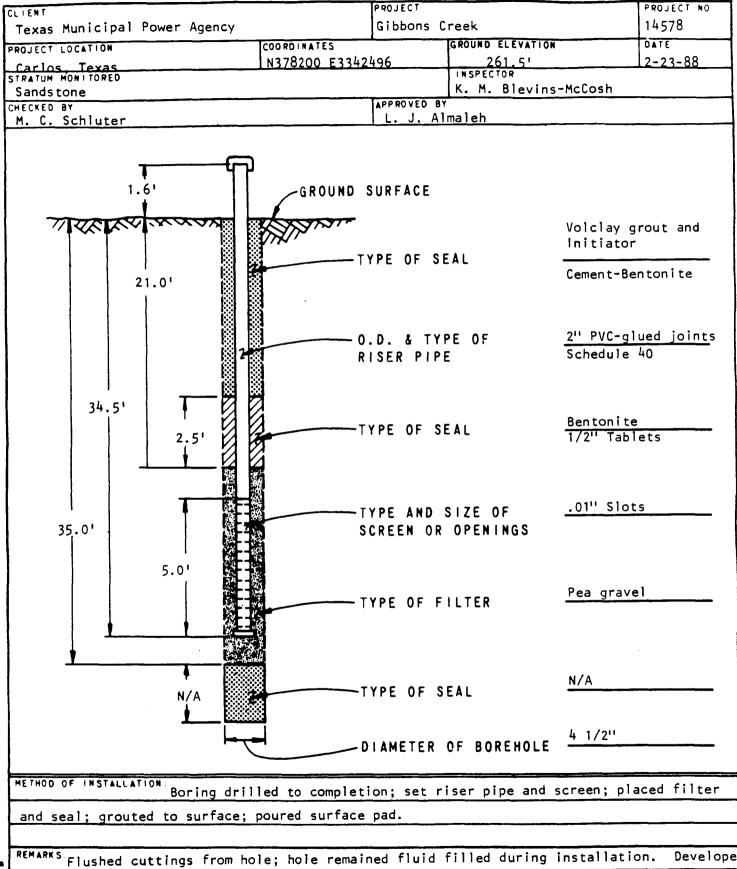
clie Texa	3.77	unic	ipal	Powe	er Ag	gency	7				PROJECT Gibbons Creek			PROJECT NO. 14578		
		OCATI				c	N3783		339148		elevation (DATUM) 266.7'	50'	DEPTH DATE STAF			
	175	ONDIT		is						INSPECTOR K. M. Blevins-McCosh				DATE FINISH 2-26-88		
SAMP	SAMP	S	AMPLI 2ND	NG 3RD	N	SAMP	CHECKE M. C.		uter		APPROVED BY L. J. Almaleh					
TYPE	1000		6"	1	VAL	RECV	DEPTH		E TYPE	CT.	ASSIFICATION OF MATE	PDTAT		REMARKS		
CORE		RUN	RUN	RQD	RECV		FEET	LOG					1,			
rw rw	2					0.8	1 - 2 - 3 - 4 - 5 -		plasti staini Grad belo Grad	city; mong (Top	eddish-brown; stiff; dist; organics; root soil) on w/some sand; trac me sandstone seams de roots below 4'	es; iron		ced boring /2" rotary .75		
rw	7 pla						7 -		plasti	CLAY; ta	.ow w/trace					
.w	5					1.4	9 -		plasti staini	city; mo	an to buff; hard; h ist; some sand; iro ially on joints; jo rizontal	n				
W	6					1.2	1 -				with silty sand bel	.ow 10'				
w	7					1.5	3 -		and :	few ceme w 12'	to brown with iron nted sand fragments	nodules; platy				
w	8					1.3	15 -		Block Cemer	ky struc nted sam	ture below 14' d grades out below	14';				
rw	9					1.5	7 -									
rw	10					1.5	8 - 9 -		CLAY;	reenish	d layer at 18' -grey; hard; high ist w/silt filled j	ointe and				
w	11					1.8	20 -			ilt; tra	ce sand; trace ligh					
.w	12			1.9 2 - Grading banded b					Grad bande	ing gree ed below	nish-grey and dark	grey				
W	13					1.9	25 -									
W	14					1.7	6 -		Slicker	nsided b	elow 26'					
W	15					2.0	8 -									

CLI		unic	ipal	. Pow	er A	genc	у			PROJECT Gibbons Cree	ek Si	ES		PROJECT NO. 14578
-		Tex					N3783	333914	8	ELEVATION (DATU 266.7'	м)	TOTAL 1	DEPTH	DATE START 2-26-88
		condition g in								INSPECTOR K. M. Blevin	s-Mo	Cosh		DATE FINISH 2-26-88
	SAME	SET 6"	AMPL:	ING 3RD 6"	N	SAME	CHECKE M. C.	luter		APPROVED BY L. J. Almale	h			
	RUN NO.	RUN	CORII RUN RECV	NG RQD RECV	* RECV	7 RQD	DEPTH IN FEET	APHICS	CLA	SSIFICATION OF N	MATER:	IAL		REMARKS
ew ew ew ew	16 17 18 19 20 21 22 23					1.8 1.9 1.9 2.0 1.7 1.9	1 - 2 - 3 - 4 - 35 - 6 - 3 - 4 - 40 - 1 - 2 - 3 - 4 - 45 - 6 - 45 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 -	Trac Grad seam	ds gradin te lignit ling dark a at 42.3	below 32' g out below 34' a below 41' grey below 42'; k grey; hard; h	igh		pp. 4-	no sample
н	1		48' 1.3	0.3	65	17	7 - 8 - 9 - 50 - 1 - 2 3 3 4 55 6 7 8 9	graine	d; slight	llaceous; grey; ly weathered; w, ontal joints	fine/trac	е	Bottom 49.8'. Ground unknow 0-3' w Reamed 1/2" b Instal section pipe; section	of boring water level n. Reamed /6 7/8" bit 3-50' w/4 it. led 2-20' ns of 2" PVC

BLACK & VEATCH FOR CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

PIEZOMETER NO. 8-15



well on 2-27-88 by flushing well with clean water for 6 min. blew out water from well with

air compressor water level recorded at 23'-10" from TOC

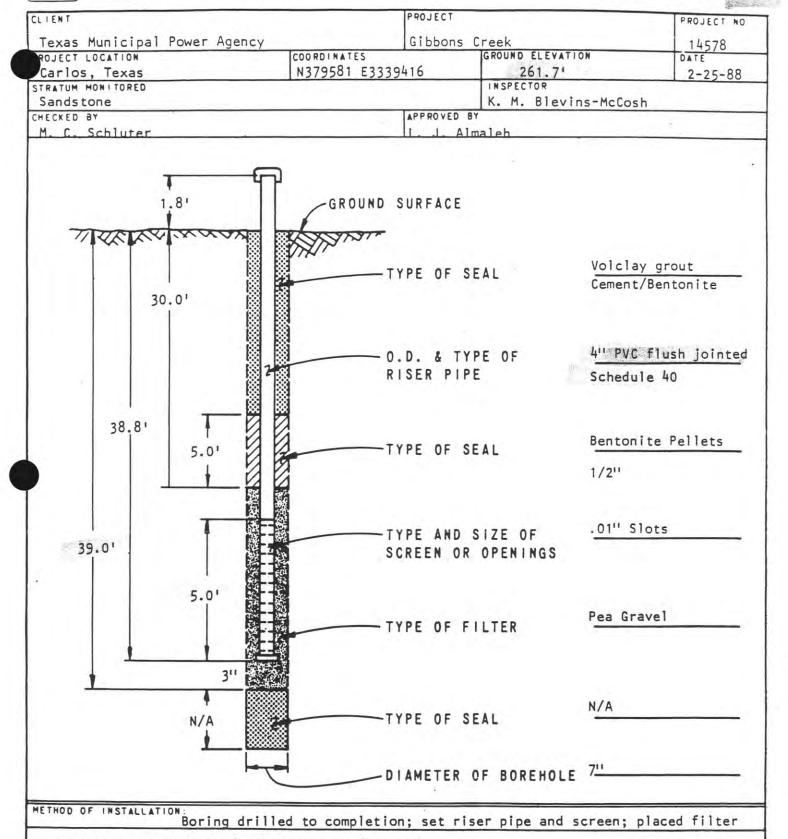
-ST-021

_		OCATI	_	rowe	T A	gency	OORDINA		W.FS.		Gibbons Creek S ELEVATION (DATUM)	TOTAL DE	PTH	14578 DATE START
Carl	os,	Texa	15				N3782	00 E3	342496		261.5'	35.0'		2-23-88
		ONDIT									INSPECTOR K. M. Blevins-M	cCosh		2-23-88
SAMP	SAMP NO.		AMPLI 2ND 6"		N	SAMP	CHECKE M. C.	Sch1			APPROVED BY L. J. Almaleh			
-			CORIN	G	-		DEPTH	SAMPLI	E TYPE					
CORE		RUN	RUN	RQD RECV	% RECV	RQD	IN FEET	GRAI	PHICS	CLA	SSIFICATION OF MATER	RIAL	1	REMARKS
							1 -		Undiffe	erentiat	ed overburden		Advance using rotary	
TW	1					1.2	3 -		hard; 1	ow plas	own; medium dense; ticity; moist; some ore silt at 3'-3.5'	stiff to sand		
TW	2					0.8	5 -							
TW	3					0.5	7 -				n to brown; hard; lo ist; trace silt		pp. 4+	. :
TW	4		10'			0.8	9 -				an to brown; poorly some silt; iron sta		Tried !	to push TW SPT - cored so reamed
3"	1	2	0	0	0	0	1 -		fine to	medium	illaceous; yellowish grained; iron stair	n-tan;	looked Sample	ry wash at cutting recovery
3"	2	2	1.3	0	65	0	3 -			weather	ed grading out below 14	4.	below :	12' in 1-3"
3"	3	2	1.2	0	60	0	15 -				1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			
3"	4	2	0	0	0	0	7 -		Gradi	ing grey	below 16'		Wi	
3"	5	2	18'	0	0	0	9 -		Iron	stainin	g on joints below 20		18-20' washed drilling diameter	sample at rotary . Continue ng with 3" er 5' core
							1 -		Lign	ite part	ings starting at 21	.7'	parrel	below 20'.
3"	6	5	4.5	0.33	90	/	3 -				nish-grey below 23' illaceous	and		
3"	7	5	25'	0.83	80	12	6 -							
							8 -		Lign	ite part	ings grading out be	low 27.5'		

CLIENT Texas M	unic	ipal	Powe	er A	gency	у			PROJECT Gibbons Creek S	ES		PROJECT NO. 14578
PROJECT :	LOCATI	ON				OORDINA	3342496		ELEVATION (DATUM) 261.5'	35.0'	EPTH	DATE START 2-23-88
ourface (CONDIT	IONS							INSPECTOR K. M. Blevins-M	cCosh		DATE FINISH 2-23-88
AMP SAM	PISET	AMPLI 2ND 6"		N VAL	SAMP	CHECKE M. C.	Luter		APPROVED BY L. J. Almaleh			
ORE RUN	RUN	CORIN		1 8		DEPTH IN FEET	APHICS	CL	SSIFICATION OF MATER	IAL		REMARKS
	5	30.	0	44	0	1 - 2 - 3 - 4 - 35 - 6 - 7 - 8 - 9 - 40 - 1 - 2 - 3 - 4 - 45 - 6 - 7 - 8 - 9 - 50 - 1 - 2 - 3 - 4 - 55 - 6 - 7 - 8 - 9 - 60	from	zontal fi 1-3" ag ings bel	ractures spaced generat; numerous lignitous 30'	rally	35'. level Reame 4 1/2 cutti hole 1-20' 1-11' 2" PV	m of boring Ground water unknown. d hole using "bit. Flush ngs out of instafled section and section of C and 5' on of screen.

BLACK & VEATCH CONSULTING ENGINEERS

PIEZOMETER NO. 8-16



EMARKS Cuttings washed from hole; piezometer installed in fluid-filled hole; well developed on 2-27-88 by flushing hole w/clean water for 8 min. and pumping until dry. Water level recorded at 38.2' from TOC.

and seal; grouted to surface; poured surface pad

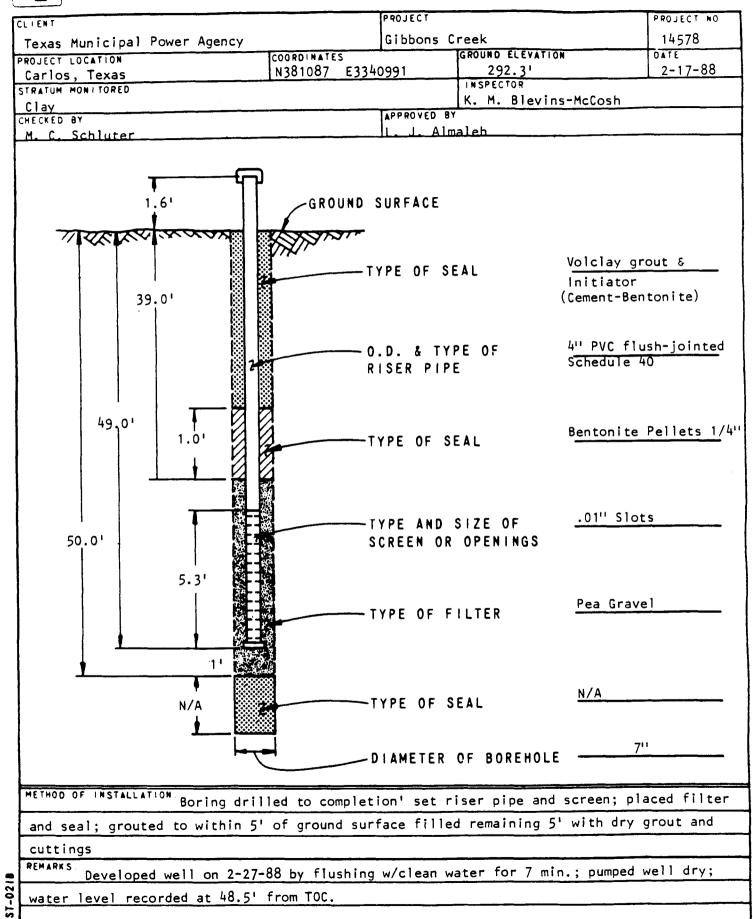
Cexa		unic	ipal	Powe	er Ag	genc	У				PROJECT Gibbons Creek S	ES		PROJECT NO. 14578	
		OCATI				C	00RD INA N3795		339416		ELEVATION (DATUM) 261.7'	39.0'	EPTH	DATE START 2-25-88	
		ONDIT	IONS	is							DATE FINISH 2-25-88				
		s	AMPLI	NG			CHECKE				APPROVED BY				
	NO.	SET 6"								L. J. Almaleh					
	RUN	RUN	CORING	ROD	8		DEPTH IN FEET		E TYPE PHICS	CLA	SSIFICATION OF MATE	RIAL		REMARKS	
IZE W	NO.	LENG	RECV	RECV	RECV	0.7	1001	1//		LAY; da	rk brown; medium der	nse; high		g advanced	
	-						2 -		plastic soil)	ity; mo	ist; organics; roots	Top		6 7/8" y wash	
W	2					1.5	3 -	- ///	moist;			ererey,			
					4		4 -		Trace	gravel	and iron staining b	pelow 4'	pp. 1		
M	3					1.1	5 -		Trace graver and from Statisting Serow V					5	
N	4					1.8	6 -	1//				pp. 2	.0		
							7 -		moist;	iron st	own; stiff; high planining; jointed	sticity;		. =	
W	5					1.7	9 -				at 7.5' and 9'; below 7'				
W	6					1.8	10 -				nd 45° to vertical i		pp. 2	.5	
						200	1 -		iron	stainin			pp. 2		
W	7					1.5	3 -								
W	8					1.7	4 -		joint	is 4"	I vertical joint at long; banded brown a .4'. Gypsum filled	ind dark			
W	8					1.7	15 -				ally 8"-1.5'	Joine	pp. 2	.75 pp. 3.5	
w	9					1.7	6 -					1	nn 2	0	
								1					pp. 3		
W	10					1.7	9 -		plastic	ity; mo	ey to dark grey; har lst; with silt seams	on			
						2	20 -	- ///	trace sa	and in)'; trace iron stain joints; occasional s	ilty	pp. 4	+	
W	11					1.6	1 -		sand poo	ckets b	elow 16'; thinly bed	ded			
W	12					1.3	2 -						pp. 4	+	
							3 -	- ///							
W	13				X	1.3	25 -						pp. 4		
w	14					1.2	6 -								
"	1.4					1.2	7 -								
	15					0.4	9 -		Lignit	ic bel	ow 29' - lignite sea	ms up to			

CLIEN		unici	pal	Powe	er Ag	gency	4			PROJECT Gibbons Creek	SES	PROJECT NO. 14578
PROJE	ECT L	OCATI	ON				OORDINA		339416	ELEVATION (DATUM) 261.7'	TOTAL DEPTH	DATE START 2-25-88
URFA	ACE C	ONDIT	IONS	is					*	INSPECTOR K. M. Blevins-N	McCosh	DATE FINISH 2-25-88
AMP	SAMP		AMPLI	NG 3RD	N VAL	SAMP	CHECKE M. C.		uter	APPROVED BY L. J. Almaleh		
ORE	CORING CORING RE RUN RUN RUN RQD % RE RUN RUN RUN RQD % TEET GRAPHICS LOG LOG LOG LOG RECV RECV RECV RQD							GRAI	PHICS	CLASSIFICATION OF MATE	ERIAL	REMARKS
SIZE		RUN LENG	RECV	0		RQD 0 0.5			SANDSTONE; fine graine Clayey SAND cemented; f some silt (sandstone) SANDSTONE; fine graine	argillaceous; greenish d; weathered ; greenish-grey; parti ine grained; poorly gr maybe extremely weathe argillaceous; greenish d; weathered; w/lignit and vertical joints -	ally aded; ered a-grey; e seams; Bot at Grounk hol Ins sect and 4" sect and	tom of boring 39'. undwater level nown. Reamed e w/6 7/8" bit. talled 3-10' tions 4" PVC 1-5.8' section PVC; set 1-5' tion .01" slot een.

BLACK & VEATCH CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

PIEZOMETER NO. B-17



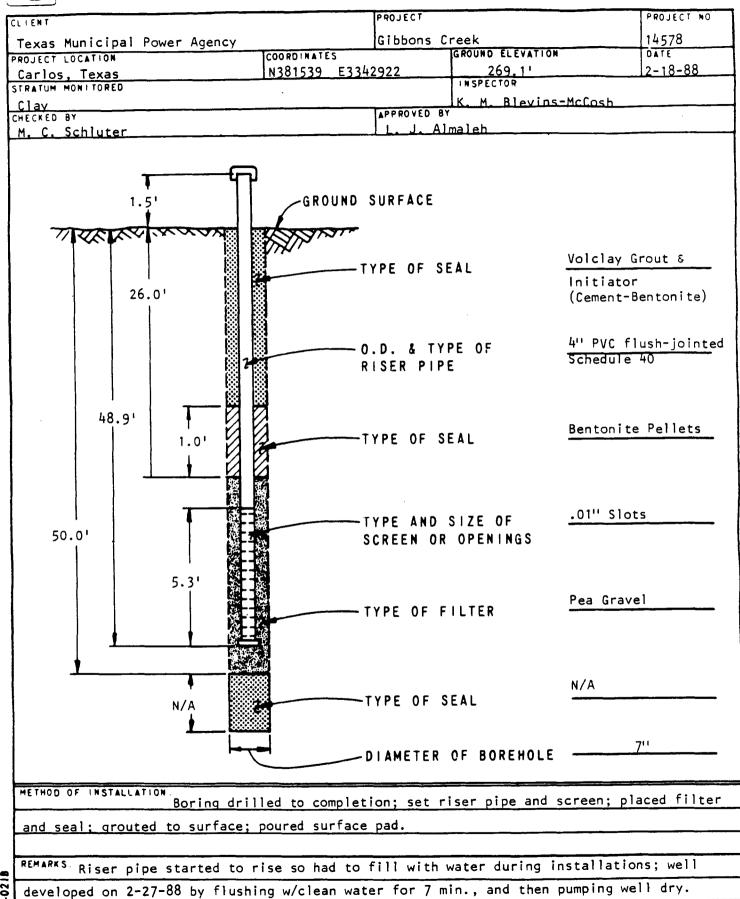
CLIE		unic	ipal	Powe	er Ag	genc	у			PROJECT Gibbons Creek S	SES		PROJECT NO. 14578
PROJ	ECT L	OCATI	ON				CORDINA	3340991		ELEVATION (DATUM) 292.3'	TOTAL D	EPTH	DATE START 2-17-88
	7	ONDIT	IONS past	ture				^		INSPECTOR K. M. Blevins-N	icCosh		DATE FINISH 2-17-88
SAMP	SAMP	SET	AMPLI 2ND	NG 3RD		SAMP	CHECKE M. C.	 uter		APPROVED BY L. J. Almaleh			
ORE	RUN NO.	RUN	CORIN RUN RECV	ROD	VAL % RECV	RECV	DEPTH IN FEET	E TYPE	CLA	SSIFICATION OF MATE	RIAL		REMARKS
w w	1					1.5	1 - 2 - 3 -	Silty very m	CLAY; br	own; stiff; med. pl some roots out below 3' below 2.5 with tra		pp. 1	
w	3					1.1	5 -			r at 4.25'		pp. 4-	
W	4					0.9	8 -		; moist;	rown to tan; hard; with sand; trace 1			: !-
w	6					0.9	10 -						
w	7					0.7	3 -	with c	emented	d; high plasticity; sand stringers; pla n staining at plate	ty in	pp. 4	
w	8					1.3	15 -	appr	ing silt	y with 2" sandy sil y 15.7'	t seam at		
w	9					1.5	7 -	Clayey plasti		an to buff; hard; l ist; with some sand ates			
w	10					0.9	9 -	Sandy moist	SILT; ta	n to buff; poorly g e clay; trace iron	raded; staining		
.w	11					0.8	1 -	plasti		own/tan mottled; ha ist; with trace san platy			
w	12					1.2	3 -		andy sil	t layer at 22.5'; g 23	rading		
w	13					1.8	25 -	iron s crysta	taining 1s at 25		s; gypsum	pp. 4	ő
w	14					1.2	7 -	moist;	iron st	rown; nign plastici aining	ty;		
rw	15					1.4	9 -			-grey; high plastic ith trace silt; tra			

arlos	LOCATI					OORDINA	res 83 E334099	1	ELEVATION (DATUM) 292.3'	TOTAL DEPT	TH DATE START 2-17-88
URFACE leari	CONDIT	IONS	ure						INSPECTOR K. M. Blevins-Mo	Cosh	DATE FINISH 2-17-88
		AMPLI	NG	N	SAMP	CHECKE	Schluter		APPROVED BY L. J. Almaleh		
ORE RUI	6"	CORING	RQD	VAL %	RECV	DEPTH IN FEET	SAMPLE TYPE GRAPHICS LOG	CL	ASSIFICATION OF MATER	IAL	REMARKS
IZE NO NO NO NO NO NO NO N		RECV	RECV	RECV	2.0 1.8 1.8 1.7	1 — 2 — 3 — 4 — 7 — 8 — 9 — 1 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2	Gra (qr	ding to leenish-gr	crace silt below 35' aminated banded ey and grey) below 3 ce at 39.8';	8' with	
W 23					2.0	4 - 45 - 6 - 7 -		ding grad	ding out below 44'	p	p. 4+
W 25	3				1.6	8 - 9 - 50 - 1 - 2 - 3 - 4 - 55 - 55 - 5			-1-1	a G u r 6 a S 1 4 s	ottom of boring t 50'. roundwater level nknown. Hole eamed using 1/2" diameter uger bit. et 4-10' and -4.6' section of " diameter chedule 40 hreaded lush-jointed PVC

BLACK & VEATCH CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

PIEZOMETER NO. B-18



-ST-021B

Water level 50' from TOC.

CLIE		unic	ipal	Powe	er Ag	gency	4				PROJECT Gibbons Creek S	ES		PROJECT NO. 14578
		OCATI				С	OORDINA N3815		E3342922		ELEVATION (DATUM) 269.1	TOTAL D	EPTH	DATE START 2-17-88
2000		ONDIT		ture							INSPECTOR K. M. Blevins-M	cCosh		DATE FINISH 2-17-88
2	SAMP	SET 6"	AMPLI 2ND 6"	NG 3RD 6"	N	SAMP	CHECKE M. C.		nluter		APPROVED BY L. J. Almaleh			
ORE	RUN NO.	RUN	CORIN	G RQD	§ RECV		DEPTH IN FEET	GI	RAPHICS	CL	ASSIFICATION OF MATER	RIAL		REMARKS
	Undifferentiated						ed overburden		using	g advanced 4 1/2" y wash				
N	1					0.6	3 -			emented	nn; poorly graded; mo sand stringers; some			
1	2					1.5	5 -		plasti	city; mo	eddish-brown; hard; ist; trace sand; iro ling some sand below	n		
4	3					1.3	8 -						pp. 4	· ‡
1	4				£	1.7	10 -		moist; gradin	with cl g to sil	ddish-brown; poorly ay and iron staining ty clay; interbeddin below 10'; few gypsu	g with	e	ž.
1	5					1.3	2 -		crysta	ls				
V	6					1.5	4 -		highly	plastic	rk brown to black; he; moist; lignitic; i trace sand below 16	ron	pp. 4+	
٩	7					0.9	6 -				9.6			
ı	8					0.9	7 -	K	Silen	CAMP. ba	n; poorly graded; mo	ier.	pp. 4+	
7	9					0.7	9 -		Clayey	clay; ir	on staining reenish-grey; highly; with trace thin si		pp. 4+	
i	10					1.4	2 -				iron staining	1 Jana		
ı	11				,	1.8	3 -		Candu	CTI.m. ~-	eenish-grey; poorly	graded.		
1	12					0.8	25 -		moist;	with tr	ace to some clay	714464)		
1	13					1.2	7 -		plastic	city; mo	eenish-grey; high ist; with some sandy	silt		
N	14					1.3	9 -							

CLIE		unici	pal	Powe	er Ag	gency	,				PROJECT Gibbons	Creek S	ES		PROJECT NO. 14578
		OCATI				С	OORDINA N3815		342922		ELEVATION 269.1	(DATUM)	TOTAL D	EPTH	DATE START 2-17-88
		ONDIT g in		ure							INSPECTOR K. M. B1	evins-M	cCosh		DATE FINISH 2-17-88
	SAMP	SET 6"	AMPLI 2ND 6"		N	SAMP	CHECKE M. C.		uter	,	APPROVED B				
ORE	RUN NO.			RQD	% RECV	RQD	DEPTH IN FEET	GRAI LOG	PHICS	CLA	SSIFICATION	OF MATER	IIAL		REMARKS
w w w	15 16 17 18 19 20					1.4 1.4 1.5 0.9 2.0 2.1	1 - 2 - 3 - 4 - 2 - 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4		Gradi green trace 2" sa Gradi Gradi green	ing to in instance of the comment of	seam at 32; sandy siling about 4 nterbedded y silty cla ed sand t seam at 3 nish-grey b igh plastic eam grading y and grey	t filled " in samp green and y below 3 7.8' below 38'	40';		
and	22 23 24			,		1.7	45 - 6 - 7 - 8 - 50 - 7 - 6 - 7 - 8 - 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9		Slick	ensides	at 44.5'			at 50 Groun unknot hole 6 3/4 Insta and 1 of 4"	m of boring '. dwater level wn. Reamed twice using "auger bit. lled 4-10' -5.5' section PVC, 1-5' on of screen.



APPENDIX B

Field Data Forms



Sample Sample Project Project Date: Sample Method	Depth:	W-4 Du 49.5 No.: 67 ↑ M P 1/201 1/201 1/201 Submer	10615 (A 14 15M	0060			Depth to W Total Depth Well Diame 1 Casing/Be (Circle one) 4 Casing/Be (Circle one)	orehole Volu	mpling: 5/, 5 s In Ch ime:	46.83
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
830	57	ART	TI	۸E		1		Ø		
332		1000	2	24.48	6,36	5.60	0,55	61	15.5	Clear
35	37,50	BLAD	2,5	24.62	6.38	5.59	0.53	63	6.8	clarislavela
240			3.5	2609	6,38	5,60	1.17	63	21.6	
X45	39,50	1000	4.5	25.70	6.37	5.59	1.20	61	26,6	
850	41.79	1000	5.25	25,67	6.34	5,55	0.81	60	0.0	
355		750	6	2625	6,38	5,55	0.92	63	00	
20	44.44	375	6.5	25,83	637	5,55	1.66	62	0.0	
915	46,50	375	6.75	26,09	6.38	5.55	012	68	9.0	
210	46.83	375	70	2673	(3)	553	1/3	G-7	0.0	Sampled
(lecto) =	amples	4	1911		4,60	-01	C'EC'	200 Pica
				(1)	110					
			9 gal	an 5	otal	Renaved				
		•	1			1/21/4100				
1/2	20110	n N	itric			-				
110	07	No	DIPER	rvative	,					
1	iter	Λ	17:0	1001100						
4		——/\	,,,							
-					_					
		_								
OTES:	51. 5	5 - à	4.11	= 27	44	X OIT	1 = 4	17	/ 2 ~	12 60
5	01100	<u> </u>	7	R /	7.7	\wedge $\cup \square$	- 7.	6'/ >	<u> </u>	12.77
ud	allon	1	Rochara	pd 51	and in				 .	-
<u> </u>	()		1)					
	Total									



Well ID:		55P	MW	-3			Initial Dept	h to Water: _	26	<i>CC</i>
	ID:55P M	13 DI	uplicate ID:					ater after Sa		
1	Depth:	46,1	7					n to Well:		
Project	and Phase	No.: 6	706 15	0060				eter: 2		
	Name:							orehole Volu		
	6/2	1.1.7					(Circle one)		
Sample	d By:	DBH	15M				4 Casing/B	orehole Volu	mes:	
Method	of Purging	: Subme	rsible				(Circle one	•		
Method	of Samplin	ng: Low f	low				Total Casir Volumes R	ig/Borehole emoved:		
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color and sediment)
1000	Sta	erted	to	Pum 1	we	11				
1005	33,02	21000	25	24.52	4,64	8.05	0.0	229	860	-landy
1010	34,26	400	5,0	24.63	4,56	8.01	0.0	33 0	210	clearing
1015	35,20	400	7.C	24,59	4.51	8,00	0,0	240	80.6	Citating
1030	34,88	500	910	24.66	4.39	8.04	0.0	247	134	
1025	34.65	650	10	24.96	4.44	7.94	0.0	251	84.5	
1030	35.62	650	12	24.56	4,44	8,30	0.0	245	A48,3	
1035	35.64	500	13	24.67	4,40	2.06	0,0	249	24.8	
1038	Col	lecte	1 5	AMPLE	5					
				,						
						_				
						_				-
NOTES:	48.1	1-26	155 =	21.62	LXAI	1=3.6	8 x 3	= 11.0	3	
5	onl	- A	fler	Sandin A	SIACU	ed 1	Dima	20 01	1	-
+5	<i>J</i>	1	ald' K'		5	dos	- Junip G	01 00		
+4				UN UI	~ 9	a lini-				 -
711	Taket									



Sample Sample Project Project Date: Sample Method	Depth: and Phase Name:	No: No: No: No: No: No: No: No: No: No:	188 670 4	- 61500 e			Depth to W Total Depth Well Diame 1 Casing/B (Circle one 4 Casing/B (Circle one	orehole Volu) ig/Borehole	ampling: 46,88 ACh	
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity NTU	Remarks (recharge, color, and sediment)
	Beg 31,60 34.78 37.32	600 600 350 350 100	2.5 3 4 5	Well 24.80 25.66 25.65 26.65 26.13	5.54 5.53 5.55 5.66 5.65	8.63 8.50 8.30 7.75 7.72	0.0 0.0 0.0	-54 -42 -25 4	341 185 122 1.17	Water below
1150	38.91 41.32 Sam Final	150 ledi	9 1	28,95 40,43 33,14 320 elov	5.67 5.86 5.68	8.01 2.007 8.45	0.00 5.19 0.00	4 -5a 41	0.0 147 815	PUMP
NOTES:	46.88			34,5		17 = 3	5.87	× 3 =	17,60	



Sample Sample Project Project Date: Sample Method	Depth:and Phase Name: / d By: of Purging of Samplin	No.: To A A A A A A A A A A A A A A A A A A	MPA Morsible	679619			Depth to W Total Depth Well Diame 1 Casing/B (Circle one 4 Casing/B (Circle one	orehole Volu) g/Borehole	mpling: 43,16 a C h ume:	
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
1530 1535 1540 1545 1545 1555 1600 1615 1620	32.65 33.63 33.59 31.95 31.61 31.82 32.12 32.19 32.30	300 250 250 250 250 250	4 67 7.5 9 9,5 10 10,5 11,5 12 Sompli	24.08 24.07 25.88 26.03 25.76 25.73 25.75 26.11	6.11 6.11 6.07 6.07 5.97 5.91 5.92 5.90 5.89	7.46 7.46 7.54 7.10 7.88 2.01 8.19 8.29 8.39	Q.Q Q.Q Q.Q Q.Q Q.Q Q.Q Q.Q Q.Q	-20 -20 -19 -19 -19 -5 -5 -5	6.0 0.0 370.0 321 279 168 106 93.9 102 938	
NOTES:	43.16	- 6.	68 = . Ge	36.48	× Q.1	7-00 PC	6,20	1 * 3	- 10	8.6



Well ID.	ΔPI	n. IL								D/
3	APM PM	197				X		h to Water: _		26
	ID: <u></u>		iplicate ID:			(later after Sa		79
		No.:	Agn	706/900	260			n to Well:		
1		, A	I boms	1	W/M			eter:		
1 -	6-22		24 (18 (M.)	1.1001	/ · (10)		1 Casing/B (Circle one	orehole Volu)	ime; ——	
1	ву: <u>D (</u>	/ \					4 Casing/B (Circle one	orehole Volu)	ımes:	
1		: <u>´Subme</u> ig: <u>Low f</u>						ng/Borehole emoved:		
			Cum.			Specific				
Time	Depth to Water p	Rate (ml/min)	Vol. (gal.)	Temp. (°C)	pH (units) 5,84	Electrical Conductance (uS/em)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
1952	13.18	590		32,95	(ILD)	4,25	1.88	-30	24,6	Clark
0957	15.58		п	23.85	5,88	4.90	0.0	=27	544	Logy
1002	16.11	400	2,5	23,78	5,89	4.89	00	-39	601	
1007	16.17		4	2347	5.87	4.91	0,0	-39	26 1	Clearing
1012	17.30	400	5.5	2354	585	492	010	-35	2,3	Very Near
1017	16.37		6.5	23,41	5.83	4.93	0.0	-35	0.0	J. C.C.
1039	16.41		7.5	23.55	5.82	4.94	0.0	- 28	0.0	
1021	1649	350	9	23.66	581	4,91	0.0	-25	0.0	
1032	16.54	250	10	23.56	5.79	4.93	0.0	-22	a. c	
	- Porne	7A 6	malia	10.30						
	V 6209	"	A GITTS	C 101) 0						
-										
		_								
		_		-						
	5:0 1 (~					
NOTES:	52,1	1-13	7,86 =	= 39.	93 x	0.17 -	= 6, 7	9 × 3	= 20,	36
5						+				
+5	1	N	Pech	rge 5	of vict	1/4				
751	urged	ther 5	apling		ν					
+5P	Mgeo	1 afte	50	inges						
DA	T	1.7	P	.01						



	Sample Project Project Date: _/ Sample Method	ID: Depth: and Phase	MW 41,00 No.: 6 BH/SM : Subme	5 uplicate ID: 796 150 A			NI RECOI	Initial Depti Depth to W Total Depti Well Diame 1 Casing/B (Circle one 4 Casing/B (Circle one Total Casir	orehole Volu	impling:	14.54
	Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
5901	11:25 11:30 11:35 11:40 11:45 12:00 12:05 12:10	Began 15.31 14.64 13.11 14.80 14.82 13.68 13.48	250 250 250 250 350 350 350	8,5 9,5 10,0 50,	24,25 24,34 25,87 24,32 24,62 24,99 24,73	3.69 3.63 3.55 3.63 3.55 3.58	5.30 5.64 5.69 5.69 5.64 5.47	0.0 0.0 0.0 0.0 0.0 0.0 0.0	34 1 34 5 3 4 7 3 18 3 15 3 17 3 1 2	323 6.2 6.1 0.0 0.0 0.0 0.0	Cleang Very Clean
0	+5 +5	43.14 uged after	r Sampli	15 = 3			= 5,47 rechar		= 16.4	2	



	ΛP	MILE	D						12-6	> 0	
Well ID:		/'W - 1	<u> </u>	0 1			_	h to Water: _			
1	ID: AP M		ıplicate ID: า	14p-1			Depth to W	ater after Sa	mpling:	14.34	
1 .	Depth:	41.00	701.500	/ A				n to Well:		<u> </u>	
1	and Phase		1011544	60			Well Diame	eter:			
1 -	,	IMPA	.				1 Casing/B	orehole Volu	ıme:		
_	b-2	2. 16.					(Circle one				
1		/BH/SM					(Circle one	orehole Volu)	ımes:		
	of Purging						Total Casin	g/Borehole			
Method	of Samplin	ig: <u>Low f</u>	low				Volumes R	emoved:			
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/em)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Rema (recharge and sedi	color,
1408	Stay	ted	PIMP	100	Je 11						
1418	13.88		1 -	2692	5.50	2.10	0,0	87	681		
1423	14.81	350	2,25	2577	5.43	2.14	0.0	96	117	Pretty o	Je ar
1428	14,49	350	3	2614	5.38	2.13	0.0	103	56.1	1 -	10 1
1433	14.31	350	4	2650	5,39	2.14	0.0	107	40,2		
1428	14,22	350	4.5	26.61	5,40	2, 14	0.0	108	33		_
1440	Bear	n Sam	pling	Well					3,3	_	
				V		_					
	A4134										
	4										
					_					_	
					-			_		_	
						-		_			
						-					
										_	
NOTES:	42.98	-13.5	28 =	29.1	$\lambda \cap$	17/=	4.95	·¥3-	14.8	24	
					- 						
5	991										
+10	991										



	1	Ax 1 - 2							11.24	
Well ID:	AP	113 -					Initial Depth			12,43
	ID: APM	רא Du ביע	plicate ID:					ater after Sa		
· ·	Depth:	<u> </u>	20(1/	2010				to Well:		
	and Phase		706 16		1/1			ter:		
Project i	10	M/A 2-16	Colblan ?	(rec)	1 M. Ne		1 Casing/Bo (Circle one)	orehole Volu	me:	
Sample	-	A DE	14/5	Μ			4 Casing/Bo (Circle one)	orehole Volu	mes:	
Method	of Purging	: Subme	rsible				Total Casin	g/Borehole		
Method	of Samplin	g: Low f	ow		20 11 20 20	03	Volumes Re	emoved:		
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (#5/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
1530	Bo	Can	Pumin		7 (ected	FOR	Jank -	1 pria	r & DIAMONA
1535	10,34	350	1 ON PI	2496	537	1.84	00	40	0.0	100500
1540	1238		4	24 78	517	1.24	7.0	66	00	very crea
1545	1227			2507	549	1.82	00	as 71	00	
1550	1216	350	6	24 91	5,49	1.83	00	79	70	
1655	1201	2)4	85	25.05	5,45	183	0.0	70	0.0	
1000	10,01	250	10	2518	5.38	187	00	71	00	
1600	11,10	220	10	20,10	2120	1100	VO	/ /	V.U	
100	1 1								1	
Calle	ted	Sounda	5 a	T 160	2					
<u> </u>		'								
-									3	
-	:									
			_							
NOTES:	43.3	9-10.	34 =	33,05	X Q.I	7 = 1	5,62	X3	= 16.	86
1	1					PI				
	A	+\$		vez	Good	Vect	10196	,		
	119/	45	Mas	atte	er c	no les	Well	take	$\sqrt{}$	
	ATTAGE	1/12	THE STATE OF THE S		7	1	VV T	10,1		



	Wall ID	511	- MW/2							17	
	Sample	10: <d -<="" th=""><th>- My 3 D</th><th>unlineta ID.</th><th>Dup-</th><th>7</th><th></th><th></th><th>h to Water: _</th><th>,</th><th>19.36</th></d>	- My 3 D	unlineta ID.	Dup-	7			h to Water: _	,	19.36
	Sample	Depth:	~ C	uplicate iD:	- Vap	_			ater after Sa		
								Total Depti	n to Well:	dill	·
	Project	Mama:	TAMPA	Ch	5 Creek						
	Project	hame: _	3-1/	OTHOR	Creen			1 Casing/B (Circle one	orehole Volu	ıme:	
		 d By:		74					΄ orehole Volu	ımes.	
			7					(Circle one)		
		of Samplir							g/Borehole		
,	Method	OI Sampin	ig. <u>Low i</u>	TOW				Volumes R	emoved:	-	
	Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
	1049	Bega	n Pi	implina	Well						
	1054	18.53	390	1	24,99	3.87	7.49	00	382	759	Dict
	1059	18.77	300	1.75	24.37	3 X3	7,49	G.O	364	192	Cleanain
	1104	18.44	390	4	14.52	3.84	7.51	0,0	350	5,3	Clearly of
	1109	18.84	300	5.5	74.79	3.76	7.5%	0.0	242	n. 0	
	MMI	B			~ 1///				710		
	VI 113										
	1110	(-0	pole	Sample	2						
			1000	1	-						
					_						
1	-										
				-							
					-						
	_										
							<u> </u>				
1			*						100		
h	NOTES:	28.17	7 - 1	7,55	= 10	/a ×	0.17	= 1.8	1 × 3	- 51	12
-	/**	9011		117)	- 1011	600	Q.17	1+0	1 X 3	= 5,4	17
	55			1	600	ad V	echaras				
	F5	Afthor	Jano	0/1					-		
		MEr	-	7	10	_					
	110	Tota									
	111)	107a	/								



	4						
Well ID:	/			Initial Dept	h to Water: _	14,7	7
Sample ID: SFL MWH Du					ater after Sa	14.0	19.41
Sample Depth:				-	to Well:		
A T	706 150 060				eter: 🕰 📉		
Project Name: TMP4	Gillons C1	cex(1 Casing/B (Circle one	orehole Volu	ıme:	
Date: 6-23-16	< An			·	<i>,</i> orehole Volu	ımaaı	
Sampled By:	<u> </u>			(Circle one		es	
Method of Purging: Subme Method of Sampling: Low fi				Total Casin			
			Cassifie	Volumes R	emovea:		
Time Depth to Water Rate (ml/min)	Cum. Vol. (gal.) Temp. (°C)	pH (units)	Specific Electrical Conductance (+8/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
1158 @ Began	Pumping In	1011	21				
1203 1813 350	3419	6.41	7.88	00	- 52	478	
1208 1803 1 350	1.75 26.65	6.39	7.88	0.0	- 56	134	Clearing
1213 17.99 350	2.5 26.72	6.39	787	20	- 57	37.4	
1218 18.73 350	3,5 2641	6.39	7.85	00	-56	4.0	
1223 18.41 350	4.5 26.5	6.31	7.82	0.0	-56	0.0	
1228 18.63	5,5 26.2	5 6.38	7.82	00	-55	00	
			, ,	,			
1229 Began	Danplina						
NOTES: 110 20		72 03					1) 1
NOTES: 42,72 -	14,79=	27.73	× 0.17	= 4,	75 X	3=1	7.24
+5 After s		6000	Hech	rarge	-		
1) After 5	2 ampling					-	
10.5 Tatal	# 5						



Well ID:	SFL	- Mh	1-2				Initial Depti	n to Water:		3
		MW2bu	plicate ID:				•	ater after Sa	mpling:	16.40
	Depth:	21/1	į				Total Depth		23,6	
Project	and Phase	No.: 6	706 15	0060			Well Diame	ter: <u> </u>	inch	
Project	Name:	IMPA	Gibbar	5 Creen	4			orehole Volu	me:	
Date:		3-16					(Circle one			
Sample	d By:	DBH/	574				4 Casing/Be (Circle one)	orehole Volu)	mes:	<u></u>
Method	of Purging	: Subme	rsible				Total Casin	g/Borehole		
Method	of Samplin	g: Low f	low				Volumes R	emoved:		
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
			_	(1						
1333	Begar	1 1 1 1 1 1 1	ng We	2						
1338	13,22	390'	10.5	26.25	6.37	11.8	0.0	111	151	Klearing
1343	19 81	300	1=	276.00	636	11.9	ac.	110	110	
1348	13,22	300	1.5	25,12	6,38	11,7	4.0	110	27.1	Clear
1353	17/12	300	3,25	25.27	6.70	120	0.0	109	0.0	Clear
1358	15,71	300	3.75	24,35	6.38 / 34	12.0	a.0	128	0,0	
1408	16.40	300 300	8	2440	6,32	120	1.0	129	0.0	
100	1014		9	01110	0,15	100	U/C	10/	CiC	
1412	Began	510	pling							
7	9									
									-	
-									-	
-										
2										
	-		-							
NOTES:	2364	-11	13 -	125	1 7).17 =	213	V2	- F	30 ,
1										JA 59
39	77=				(2)	od Re	chara	e		
	+2 5	After	Somp line)		110	- ing			
_	1-87									

10 Total



	SE	1 10	R							
Well ID:		/V\W	<u>ر</u>					h to Water: _		
1	ID: SFLA		uplicate ID:				Depth to W	ater after Sa	mpling:	21:13
Sample		majo	<u> </u>	0-10				n to Well:		
1	and Phase	A	706.15				Well Diame	eter:	·A	
_	Name:		Gib	cont (reck		1 Casing/B (Circle one	orehole Volu)	ıme:	
	d By:		DRH	15M	 -		4 Casing/B	orehole Volu	ımes:	
	of Purging		rsible			}	(Circle one)		
1	of Samplir						Total Casin Volumes R	g/Borehole emoved:		
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
			DUMAD	ind		7.5/0-1				the state of the s
1449	Bee	2m 2			rell					
1454	19.98	# 400	2,5	24,52	4.99	12.2	0.0	287	204	
1459.	19.56	250	3	26.33	4.28	13.3	0,0	272	70 /	
1504	19.71	250	3.5	26.46	4 96	172	0.0	2/1/	5/15	
1509	20.49	250	175	244	505	12,3	0.0	263	0.0	
					-1115	12,0	<u> </u>		(1/0.	
1511	Color	cled	Samel	0	· _					
,		<u>, 0 00 \</u>	JAMES		-					
				-						
NOTES:) 11 2 5	150	7 -	0 11 7	\ \ \	17 -	1 47	\ \ \ \ \	11 0	
		- 17.0	<u> </u>	0.70	(XV)	17=	CTI	X 3	= 410	19
4	75					Decent	Radi	P		
\	1	Ftor	Gamal.	NØ	6-	Decent 1 for L	14	779		
1	10	16	100	1,5	900	0 100 1	-OW III	IW		



	5=1		<u> </u>							1 -7 -	11
	SFL					-		Initial Depth	n to Water: _	1/0	0170
1			plicate ID:					Depth to Wa	ater after Sa	mpling:	01117
Sample	Depth: <u></u>	<u>d1.11</u>	20/150	-/^				Total Depth	to Well:	×2,11	
	and Phase				V AI				ter:		
			6,660	ns Clee	1/1/1/ C			1 Casing/Bo (Circle one)	orehole Volu	me:	
	6-23-							•	orehole Volu	mes:	
	d By:	. /	1					(Circle one)			
	of Purging							Total Casin			
Method	of Samplin	g: Low f	low					Volumes Re	emoved:		
Time	Depth to Water	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Elec	cific trical ctance (dm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Turbidity	Remarks (recharge, color, and sediment)
1541	Bea	an P	umping	Well		, ,					
1546	19.65	250	17	24 95	4.84	12	.7	0.0	214	162	
1551	20.10	250	2,25	25.99	4.63	12	. X	00	1/1	560	
1556	20.93		.3	26,09	4,40	12	.9	0.0	254	152	
1.3-0		7.7.					' / 	0.0			
1558	Call	octec		amp e	5					}	
		<u> </u>		1							
			-								
NOTES:	231	1-1	7.41 :	57	0 ×	0.1	7 -	= 0,91	69 X	3 =	291
	<i>∽</i> J ₀ /	,		~ · · ·	1 D	1	,				
_	/1 <			Ba	d R	EC/v	219	P			
	301/0	in 5			•	-					
	1										



			1						foster wheeler		
	SSP/					Initial D	epth to Wa	er: 6.9	<u>o'</u>		
Sample II	D:	Dup	licate ID: _			Depth to	o Water afte	er Sampling	1: 15.28'		
1						Total De	epth to Well	: 43.8			
			150060			Well Dia	meter:	<u>u</u>			
I			bons Cr	rek				Volume: _			
	August	• -	16			(Circle o	•				
	ву: _ В У		. 1	4 Casing/Borehole Volumes:(Circle one)							
			rsible pu	up			ising/Boreh				
Method o	f Sampling	: <u>low +</u>	ow			Volume	s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (us/om)	Dissoived Oxygen (mg/L)	Oxidation- Reduction Potentiai (mV)	Remarks (color, turbidity, and sediment)		
Low	Flow Stabi	lization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
1018	38'	150		25.9	3 5.82	8.37	Ø,58	-5	NTU: 676 /t. gray/brown;		
1023		175		26,00	5.91	8.33	Ø.48	-13	NTU:651 " "		
1028	V	11	n 2.5	26.3		8,30	0.44	-15	NTU: 504 beginning to clear		
	- 6		1	1	- 1				Salaming to cital		
	0	$\alpha m p$	195	7	ake						
,		/									
				_							
				_							
	·										
	65337165	and the same	pH CALIBR	RATION ((choose two)			М	odel or Unit No.:		
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0					
Field Temp	perature °C								7.0		
Instrument	Reading										
		IFIC ELEC	TRICAL CO	NDUCT	ANCE (SEC)	- CALIBRATIC)N	M	odel or Unit No.:		
KCI Solutio	n (μS/cm=μ			1.12.0017	1413 at 25°C	12880 at 25°0		IVII	ouel of Officials.		
Field Temp	erature °C		_								
Instrument	Reading								1		
MAN AND	ORP/REDC	X CALIBR	ATION	Tental I	DISSOLV	ED OXYGEN (CALIBRATIO	ON No	otes:		
	Solution (mV			-	Altitude / Sali			140	7.00.		
Field Temp		-			Field Temper						
	Reading (m	 1V)			Instrument Re						
Model or Unit No.: Model or Unit No.:											



		2.00								wheele	er
	SSP M					Initial D	epth to Wat	er: 21.3	6'		
Sample II	D:	Dup	licate ID: _			Depth to	o Water afte	er Sampling	: 34.86		
ı						Total De	epth to Well	: 46.	70'		
l .		o.: <u>6706</u>		-		Well Dia	ımeter:	Ju		····	
		MPA GI					g/Borehole	Volume: _			
		23,2016	<u>-</u>			(Circle o	•				
	By:		1.1			4 Casing (Circle o	g/Borehole one)	Volumes: _			
1		<u>Subme</u>	/1/	Sung		Total Ca	sing/Boreh	ole			
Method o	f Sampling	1: <u> OZN </u>	Joan)			Volume	s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp (°C)	. pH (units)	Specific Electrical Conductance (µS/om)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, turb	Remarks Idity, and s	sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
1110	44'	175		25.3	6 5.44	9.88	Ø.44	47	NTu: 904	lt.tan:sli	ight sulfu
1115				25.3	7 5.40	10.2	Ø.41	45	NTU: 781	_	
1120				24.99	5.40	10.2	6.40	43	NTU:308	beginning	to clear
1125		1	x2.5	25.12	5.39	10.1	Ø.39	42	NTU: 112		
				1		_					
		Dam	ple5	/	ake	n					
			1								
	-										
			pH CALIBI	RATION	(choose two)			M	odel or Unit	No.:	
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0					
Field Temp	perature °C										- 1
Instrument	Reading										
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATIO	ON	М	odel or Unit	No.:	
KCI Solutio	n (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25°	С				
Field Temp	erature °C										
Instrument	Reading										
	ORP/RED	OX CALIBR	ATION		DISSOLV	ED OXYGEN (ON N	otes:			
Standard S	Solution (m	V) .			Altitude / Sali	nity %					
Field Temperature °C Field					Field Temperature °C						
Instrument Reading (mV) Instrum						eading (mg/L)					
Model or Unit No.:					Model or Unit	No.:					



										wheeler
Well ID: _	SSP	MW-3				Initial D	epth to Wat	ter: <u>2</u>	7.11	
			licate ID: _						ng: <u>31.30</u>	
Sample D	epth: 💢 🟄	16'					epth to Wel		2'	
			150060			Well Dia	ameter:	2"		
Project Na	ame: <u> </u>	APA GI	hoons Cr	reek				Volume:		
			6			(Circle	•	Valumas		
	Ву: <u>78-</u> 4					(Circle		volumes		
			rsible pur	MP			asing/Boreh			
Method of	Sampling	j: <u>/øw</u>	flow_			Volume	s Removed	:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp (°C)	. pH (units)	Specific Electrical Conductance (ps/cm)	Dissolved Oxygen (mg/L)	Oxidation Reductio Potentia (mV)	n (color turb	Remarks idity, and sediment)
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1205	46'	175		24,9	4 4.35	8.21	Ø.41	248	NTU: Ø.Ø	Tan; no odor
1210	ſ	f		25,2		8,15	Ø.35	261	NTU: Ø. Ø	
1215				25.34	1 4,31	8,17	Ø.31	272		Hitan jus ador
1220	V	V	33.5	25.10		8.18	Ø,30	276		11 11
			_	1	-	-1	-			
			amb	1.05		aker	1			
		-								
SHEET TO		lu vale	pH CALIBI	RATION	(choose two)			STEET A	Model or Unit	No.:
Buffer Solu	ıtion			pH 4.0	pH 7.0	pH 10.0				
Field Temp	erature °C	-		-						
Instrument						+				
		CIEIC EL EC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATION	ON		Model or Unit	No.*
KCI Solution			THIOAL GO		1413 at 25°C	12880 at 25°			woder or offic	110
					1413 at 23 0	12000 at 25				
Field Temperature °C										
Instrument Reading										
ORP/REDOX CALIBRATION Standard Solution (mV)					DISSOLVED OXYGEN CALIBRATION Notes:					
Standard Solution (mV)				Altitude / Salinity %						
				Field Temperature °C						
				Instrument Reading (mg/L)						
Model or Unit No.:					Model or Unit	No.:		-		



	000									wheeler		
		MW-4					epth to Wat					
Sample ID):	Dup	licate ID: _	DUP-	L	Depth to	o Water afte	er Sampling	40,63	/		
	epth: 🖔	111				Total De	epth to Well	: <u>51.5</u>	1			
	_	- Carl	150060	4		Well Dia	meter:	2"				
			ons Cre			1 Casin	g/Borehole	Volume: _				
Date: _A	ugust 2	3,2016	>		-	(Circle d	-					
	By: _ 🔼		-			4 Casing (Circle o	g/Borehole	Volumes:				
			rsible pu	Lmp .		•	sing/Boreh	ole				
Method of	f Sampling	: low.	flow			Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (us/om) m.S.cm	Dissoived Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	l He	emarks ity, and sediment)		
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
1312	49'	175		25.5	0 5.99	5.60	0,47	126	NTU: 163	Stained brown no	الم	
1317				25,59		5,59	0.41	/15	NTU: 109	It. tan; no odor		
1322				25.81	6.11	5,57	Ø,36	108	NTU: 56.3	clearing up		
1327	V	V	i Hgal	25.79		5.59	ø.35	106	NTu: 33.6			
		- <	٠, ١	1		1						
			amp	les	Va	ren						
					•							
			pH CALIBI	RATION (choose two)			N	odel or Unit N	lo.:		
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0						
Field Temp	perature °C											
Instrument	Reading		-								.00	
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATIO	ON	N	lodel or Unit N	lo.:		
KCI Solutio			-		1413 at 25°C	12880 at 25°				7.50		
Field Temp												
Instrument												
Laboratoria de la companya de la com		OX CALIBF	RATION		DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes:			
Standard S										- los 11		
					Altitude / Salinity % Field Temperature °C True - Samples				Samples take	n		
					Instrument Reading (mg/L)							
Model or U					Model or Unit No.:							



	45.44					200				wheeler
	APM					Initial D	epth to Wa	ter: <u>/ / /</u>		
Sample II	D:	Dupl	icate ID: _				o Water afte			1.21'
	epth:			<u> </u>			epth to Well			
		o.: 6706				Well Dia	ameter:	<u>2" </u>		
Project N	ame:/	MPA GI	blooms C	teek		1 Casin (Circle o		Volume:		
		24,20	6			,	g/Borehole	Volumes	_	
	By:					(Circle		volumes	·	
		<u> 5 ubmer</u> 1: low fl		amp	· 		asing/Boreh s Removed			
Time	Intake Depth		Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissoived Oxygen (mg/L)	Oxidation Reduction Potentia	n- in (color, tu	Remarks irbidity, and sediment)
Low	Flow Stabi	liization Crit	oria	+/- 3%	./ 0.1	MS/CM	./ 400/	(mV)	NTU	
LOW	H1		ena	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		11 - 41
0030		×175		04 8°	7 501	1 -9-7	0 -0	70	DUTU	r smell mostly
-925				27.0	1 5.06	1.77	0,50	78	151	clearing of
940		×175		2110	5 5 10	11/7	CATT	76	136	Mearly clear
0945		-175	~3.5	21.10	5,10	1 80	0,43	76	46.3	Masly dea
094/	1/		VIFC	24,8) 5 ₁ (1)	1.80	0,42	76	22,6	Cka
116	V		LLS	1	7 16	V				
			_							
					-	,				
					. 0				-	
	Menanta (1997)							1		
			PH CALIBI		choose two)				Model or U	nit No.:
Buffer Solu				pH 4.0	pH 7.0	pH 10.0				
Field Temp	perature °C									
Instrument	Reading									
	SPEC	CIFIC ELECT	TRICAL CO	NDUCTA	ANCE (SEC)	- CALIBRATIO	ON		Model or U	nit No.:
KCI Solutio	n (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25°	С			1
Field Temp	erature °C									j
Instrument		<u>.</u>								
	ORP/REDO	OX CALIBRA	ATION		DISSOLV	ED OXYGEN	CALIBRATI	ON	Notes:	
	Solution (m\			1,	Altitude / Salir					
					Field Tempera		1	-+		
					Instrument Reading (mg/L)					
					Model or Unit		1			



Well ID:	APMU	-10				Initial D	epth to Wa	ter: 13.	72	570
	D:		licate ID: 👤	DUP-	2	Depth to	· o Water afte	er Sampling	: 14.	27'
Sample 1	Depth: ¾	40.5				Total De	epth to Wel	1: 43°		
Project a	ınd Task No	.: 6706	150060			Well Dia	· ameter:	211		
Project N	Name: TA	11A G	iblans	Creel	Mine		g/Borehole	Volume: _		
	By:					•	•	Volumes:		
	of Purging:		Kille P	чиР		(Circle				
	of Sampling		Flow	4MP			asing/Borel s Removed	nole I:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (ps/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	15 M. S. S. S.	Remarks turbidity, and sediment)
Low	Flow Stab	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1158	240,5	175		27.50	5.72	2.02	Ø,65	10	693	It. tan; strong egg/sulfa
1203	1			27.7		2.05	Ø.49	17	827	11 11 11 11
1208				27.19	5.70	2.08	0.40	27	304	elearing up; 11 11 11
1213	W_	V	W. 7.0	27.2	5 5.69	2,09	Ø.38	36	114	
-		_			-					
			empl	es_	1 at	cen				
D.#. 0.			PH CALIBI		(choose two)			M	odel or	Unit No.:
Buffer So				pH 4.0	pH 7.0	pH 10.0				
<u> </u>	perature °C									
Instrumer	nt Reading			Secretary and the second						
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATIO	ON	M	odel or	Unit No.:
KCI Soluti	on (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25°	С			
Field Tem	perature °C									
Instrumen	t Reading									
	ORP/RED	OX CALIBF	RATION	445.49	DISSOL	ED OXYGEN	CALIBRATI	ON N	otes:	
Standard Solution (mV)					Altitude / Sal			D	UP-	-2 taken
					Field Temperature °C					
Instrumer	nt Reading (r	mV)			Instrument Reading (mg/L)					
Model or	Unit No.:				Model or Uni	t No.:				

1	SAMPI OR DEV	LING ELOPM	IENT R	ECOF	RD								amec foster
Well ID:	APMI	N-5					Initial D	epth to	Wat	er:	10.	61	wheeler
Sample I	D:	Du	plicate ID:				Depth to Water after Sampling:						
1 .	Depth:	41				-	Total Depth to Well: 43.1						
		o.: <u>670</u>					Well Diameter:						
	lame: 1		Sibbons	5 (1	cci	K Mine	1 Casing (Circle o	g/Bore one)	hole	Volum	e:		
Sampled	ву: <u>В</u>	5/5M					4 Casing	g/Bore	hole	Volum	es:		
Method o	of Purging:	_Sub	narsi ble	1	VM	P	(Circle o	•		ماء			
Method o	of Sampling	: Law	flow				Volume	s Remo	oved	oie :		<u> </u>	
Time	Intake Depth	Rate (ml/min)	Cum. Vo (gal.)	Ten (°C		pH (units)	Specific Electrical Conductance	Dissoi Oxyg (mg/	en	Oxidat Reduc Poten (mV	tion tiai	color,	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3	3%	+/- 0.1	+/- 3%	+/- 10	0%	+/- 10		VIV	
1402	41'	900		24,8	5	3.77	551	1,4.	3	301	5	18	1114 1
1407		200		24.6	4	3.67	5,49	0.5		319		80	11 /
1412	V	a00	3.5	24,	16		5.54	0,4	, 7	33		72,3	COLING UA
1412		DAMPL	LD5			lecto							J. Ting op
		' V V				110010							
					_								
			*										
			pH CALIB	RATIO	V (ct	noose two)			NA.		Mod	el or l	Init No.:
Buffer Solu	ıtion			pH 4.	.0	pH 7.0	pH 10.0				1		
Field Temp	erature °C										1		
Instrument	Reading										1		
	SPEC	IFIC ELEC	TRICAL C	ONDUC	TAN	ICE (SEC) -	CALIBRATIO	N	1819		Mode	el or I	nit No.:
KCI Solution					_	413 at 25°C	12880 at 25°C	_			10.000	J. O. O	THE NO.:
Field Tempe	erature °C			-	+			-			1		
nstrument F					+-			+					
		X CALIBR	ATION			DISSOLVE	D OXYGEN C	AI IRD	ATIC	AF	Note		
Standard Solution (mV)						titude / Salin		ALIDN.	AIR		Note	s: 	
Field Temperature °C					Field Temperature °C								
Instrument Reading (mV)					Instrument Reading (mg/L)								
Model or Unit No.:						Model or Unit No.:							





										foster wheeler				
Well ID: _	Well ID: AP MW - H Initial Depth to Water: 12.56													
Sample ID):	Dup	licate ID: _			Depth to	o Water afte	er Samplin	g: 4 5	14.68				
Sample D)				Total De	epth to Wel	l: <u> 5 </u>	3.81					
			6150			t .	ameter: 📿	"						
Project Na		MPA	Gibban	5	Treek M		g/Borehole	Volume: _						
Date: <u>&</u>		6				(Circle	•							
Sampled I	Ву: <u>К<i>6</i></u>	-	VIII			4 Casın (Circle d	g/Borehole one)	Volumes:						
Method of		1	esible	- Pum	<u> </u>		asing/Borel							
Method of	Sampling	· Law	- Flaw			Volume 	s Removed	•	***					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks rbidity, and sediment)				
Low	Flow Stabi	lization Cr	Iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		Light all 5				
1442	1472 50' 200			24.6	15.46	4.81	0.52	54	752	Dark From				
1447		200		25.9	4 5.49	4.83	0.41	54	684	U.				
1452		300		27.14	5.48	4.85	0.41	54	568	cleaning 5/				
1457	***	200	2,5	Q7.30	5.49	7.86	0.38	_54	254					
1457	' 4	ample	25 (locto									
					14	1								
					-				,					
						White and the second								
			pH CALIBI		(choose two)			V	Model or Ur	ni No.:				
Buffer Solu				pH 4.0	pH 7.0	pH 10.0								
Field Temp	erature °C									- 1				
Instrument	Reading													
	SPEC	IFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATIO	ON	N	lodel or Ur	nit No.:				
KCl Solution	n (μS/cm=μ	ımhos/cm)			.1413 at 25°C	12880 at 25°	C							
Field Temp	erature °C		_											
Instrument	Reading	_												
	ORP/REDO	OX CALIBF	RATION		DISSOLV	ED OXYGEN	CALIBRATI	ON N	lotes:					
Standard Solution (mV)					Altitude / Sali	nity %		E	QBK '	8-24 collected				
Field Temperature °C					Field Temper	ature °C			@ 1518					
Instrument	Reading (r	nV)			Instrument R	eading (mg/L)								
Model or U	nit No.:				Model or Unit No.:									



										wheeler			
	SFLI		····			Initial D	Initial Depth to Water:						
		Dup	licate ID: _			Depth to	Depth to Water after Sampling: 21.23						
	epth: %						Total Depth to Well: 23.//						
		6706				Well Dia	Well Diameter: 2 4						
		4PA Gu				1 Casing (Circle o	1 Casing/Borehole Volume:(Circle one)						
Sampled	By: <u> 5 /</u>	1				4 Casing (Circle o	4 Casing/Borehole Volumes:(Circle one)						
		Subme		ump			asing/Borel	ole					
Method o	f Sampling	:_/ow	flow				s Removed						
Time Depth (mi/min) (gal.)			Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/cm)	ectrical ductance (mg/L)		Remarks (color, turbidity, and sediment)				
	Flow Stabl	lization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU				
8:40	\$20	200		24.3	3 4.09	12.9	1.11	351	98.3	H. tan; no odor			
8:45				24.4		13.0	Ø.88	334	29.3	clearing up			
8,50				24.4		13.0	Ø.98	335	11.0	clear			
8:55				24.5	4 3.93	12.9	1.27	344	53.3				
9:00	V	V		24.7	0 3.88	12.9	1,40	350	112				
		4		X	A	1	h ->						
- 4		9	any	ses	1/9	nen			1				
1.0		1 4	/		1	, ,	1		ļ.,.,.				
A Very	o Stopp	ed pull	ing wa	ter,	wing 50	emple col	ection	(WIL h	ad dra	wn down).			
NOT	enough	Volume	recha	ige in	well to	collect san	nples - 1	Will re	turn le	ater			
70 M	are an	other s	ample d	ttemp	7				ļ				
	DATE OF STREET		- L CALIDI	PATION	Shoose two								
Buffer Solu	rtion.		PH CALIBI		choose two)			N	lodel or U	nit No.:			
				pH 4.0	pH 7.0	pH 10.0				V			
Field Temp													
Instrument													
			TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATIC	N	M	lodel or U	nit No.:			
KCI Solution		mhos/cm)			1413 at 25°C	12880 at 25°	С						
Field Temp	erature °C												
Instrument I	Reading												
	ORP/REDO	X CALIBR	ATION		DISSOLV	ED OXYGEN (CALIBRATI	ON N	lotes: ///	6-WL=19.66			
	Standard Solution (mV)					nity %							
Field Temp					Field Temperature °C								
Instrument		nV)		100	Instrument Reading (mg/L)								
Model or U	nit No.:				Model or Unit No.:								

1	SAMPL OR DEV		IENT RE	COR	D							amec foster	
Well ID:	SFL	MW-	5				Initial [)ent	th to Wa	ter:		wheeler 15.96'	
Sample II	D:	Dup	plicate ID: _							er Samplir	ad:	19.181	
Sample D	Depth:	<u>22'</u>					Total D	enti	h to Wel	lı Janıpı	1g: 24.3 '	11.10	
	nd Task No	o.: <u>67</u>	70615	006	0		Total Depth to Well: 24,3 Well Diameter:						
	lame: <u>7</u> 8-25	MPA G	Siblms				1 Casing/Borehole Volume:(Circle one)						
	By: _ \$ 6				_		-		•	Volumes:			
1		Submers	able P	NMP			(Circle (one	·)				
			Flaw	/	_		Total Ca Volume	asin s R	ng/Boreh emoved	nole :			
Time	Intelle Bot Cum. Vol.				np. pH		Specific Electrical Conductance (p3/ent)	Dissolved		Oxidation Reduction Potential (mV)	n (oolor (Remarks turbidity, and sediment	
Low	Flow Stabi	ilization Cri	iteria	+/- 3%	%	+/- 0.1	+/- 3%	+	/- 10%	+/- 10%	APTI		
0942	22'	300		24.8	(2		11.8	+	78	320	NTU 43.6	M +	
947	İ	150		25,4		4.34	11.8		51	301	40,1	1	
0952	V	150	3.0	25.8	_	4.34	11.8	1	3.5c	213	10.6	NO Odac	
0952	-5	AMP	e5		<u>∍</u> ¢	20 10							
		7.											
STAR SE			pH CALIBR	RATION	(ch	nose two)					Model or L	1.00 N I = 1	
Buffer Solu	ition			pH 4.0	T	pH 7.0	pH 10.0				/louer or c	Jnit No.:	
Field Temp						P	pi						
Instrument					+		+						
NO DESCRIPTION		IFIC ELEC	TRICAL CC	NDUCT	TAN	CE (SEC) -	CALIBRATIC	N	25.23	N.	Model or L	late Nia i	
KCl Solution				1		413 at 25°C	12880 at 25°0			14	TOUGH OF C	mit ivo.;	
Field Tempe		,				10 41 25	12000 4, 22	+					
Instrument F								+					
		OX CALIBRA	ATION		100	DISSOLVI	ED OXYGEN (CAL	IRRATIO	ON N	lotes:		
Standard Sc			T		Alt	titude / Salini		7	IDIIA)N	Oles.		
Field Tempe		<u>-</u>	+		Field Temperature °C								
Instrument I	Reading (m	1V)			Instrument Reading (mg/L)								
Model or Ur	nit No.:				Model or Unit No.:								



Well ID:	SFL	MW-2				initial D	epth to Wa	ter: 10	.521	wheeler	
Sample II	D:	Dun					o Water afte			681	
Sample D	epth:	21'					onth to Wal	າ. ລິຊ			
Project a	nd Task No	.: <u>6</u> 706	15006	0			ameter:	à"			
Project N	ame: <u>71</u>	UPA G; 25, 20	bbons C	reek	·	1 Casin (Circle	g/Borehole one)	Volume: _			
Sampled	By: <u>5</u> 1	1				4 Casin (Circle	g/Borehole one)	Volumes:		4	
		5 ubme		namo		,	asing/Borel	nole			
Method o	f Sampling	: 10w f	low				s Removed				
Time	Time Intake Depth Rate (ml/mln) Cum. Vol (gal.)			Temp (°C)	pH (units)	Specific Electrical Conductance (µS/ym)	Dissolved Oxidatic Reducti Potenti (mV)		n (color turbidity and codimen		
	-	The State of		+/- 3%		+/- 3%	+/- 10%	+/- 10%	NTU		
1030	21'	150	925/24	25,3	1 5.49	11,0	0.83	230	429	NO ODE	
1035		150		247		11.0	054	219	419	Clearing up sl	
1040		150		26.9	1 111	11.0	0.47	210	418	,	
1045		150	×3,5	27	06 5,61	11.0	0.44	196	288	Clearing up 5	
1045	*/	imple	57	1	21						
		ar pr		an	(4)						
				,							
	_				-			-			
			NH CALIBI	MOITAC	(choose two)						
Buffer Solu	ution		PH CALIBI	and the said of the last				M	odel or L	Init No.:	
				pH 4.0	pH 7.0	pH 10.0					
Field Temp											
Instrument											
VOLO 1 "			I RICAL CO	DNDUCT		CALIBRATIO	70	M	odel or U	Init No.:	
KCI Solution		mhos/cm)			1413 at 25°C	12880 at 25°	С				
Field Temp											
Instrument		all gray areas									
		X CALIBR	ATION			ED OXYGEN	CALIBRATIO	ON N	otes:		
	olution (mV	')		\longrightarrow	Altitude / Sali		<u> </u>				
Field Temp			-		Field Tempera						
Instrument Model or U		IV)			Instrument Reading (mg/L)						
Model or U	NO.:				Model or Unit No.:						



	CTI		1					151	1				
		MW-L				Initial De	Initial Depth to Water: 14,30						
Sample ID	D:	Dup	licate ID: _			Depth to	Depth to Water after Sampling: 18,38						
Sample D	epth: 4	170	1150-1			Total De	Total Depth to Well: 42.7						
			615006		-	Well Dia	Well Diameter:						
			bbons Cr				1 Casing/Borehole Volume:(Circle one)						
			16		-	•	4 Casing/Borehole Volumes:						
	By: <u>5</u>		: 10		-	(Circle o							
1			Misible p	amp			sing/Bore						
Method o	f Sampling	low_	TION				s Removed	:	,				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/om) MS/cm	Dissoived Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks urbidity, and sediment)			
Low	Flow Stab	llization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU				
1218	40	175		27.11	5.98	7.85	Ø,53	-12	403	H. tan; nooder			
1223				27.26	5.95	7.91	0,42	-9	230				
1228	V	V	\$3,0	27.3	9 5.94	7,90	Ø,39	-8	111				
		-5		-	Th								
		0	cimp!	25	Jak	en							
			4										
			pH CALIB	RATION (choose two)		N	lodel or l	Jnit No.:			
Buffer Sol	lution			pH 4.0	pH 7.0	pH 10.0							
Field Tem	perature °C)											
Instrumen	nt Reading												
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATIO	ON	N	fodel or l	Jnit No.:			
KCI Solution	on (μS/cm=	μmhos/cm)	<u> </u>	-	1413 at 25°C	12880 at 25°	С						
Field Tem	perature °C												
Instrument	t Reading												
	ORP/RED	OX CALIB	RATION	alena e	DISSOL	VED OXYGEN	CALIBRAT	ION N	lotes:				
Standard	Solution (m	ıV)			Altitude / Sal	linity %							
Field Temperature °C					Field Temperature °C								
Instrument Reading (mV)					Instrument Reading (mg/L)								
Model or	Unit No.:				Model or Unit No.:								



		0								wheeler			
	SFL N					Initial De	epth to Wat	ter:	7.33				
-			licate ID: _				o Water afte	A		06'			
	epth: 💥 🗸						epth to Well		<u> </u>				
			150060			Well Dia	ameter: <u>2</u>	H					
Project N	ame:	MPA Gi	bbons C	reek				Volume: _					
			16			(Circle o	one) g/Borehole	Volumes					
Sampled	By:	1	.17			(Circle o		Volumes.					
		, n	ersible pu	imp			asing/Boreh						
Method o	f Sampling	1: 10w +1	000)			Volume	Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/cm) mS/cm	iectrical nductance (mg/L) Dissolved Oxidation Reduction (mg/L) Potential			RAMARKS			
Low	Flow Stabi	iiization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	,			
1314	₹25.5	200		26.50	3.52	7.29	6.45	348	Ø.Ø	opaque ino eder			
1319					3.50	7.29	Ø.37	351	1000	11 11			
1324	<u> </u>	<u>V</u>	0.E%	26.50	3.50	7.29	0.34	353	430	clearing up			
		5		-	-					3			
			eny	C S	10	iker	1						
	L		V										
								erili .					
								,					
	Park II.		pH CALIBF	RATION (c	hoose two)		9886	N	lodel or U	nit No.:			
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0							
Field Tem	perature °C	,											
Instrumen	t Reading						٠			4			
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTAI	NCE (SEC)	- CALIBRATIO	ON	N	Model or Ur	nit No.:			
KCl Solutio	on (μS/cm=μ				413 at 25°C	12880 at 25°				1200-7			
Field Temp	erature °C							100					
Instrument	Reading						1	1600	400	100			
	ORP/RED	OX CALIBF	ATION		DISSOLV	/ED OXYGEN (CALIBRATI	ON N	lotes.				
Standard Solution (mV)					ltitude / Sali	inity %		1		3			
Field Temperature °C					ield Temper	rature °C							
Instrument Reading (mV)					strument R	eading (mg/L)							
Model or l	Jnit No.:			М	Model or Unit No.:								



				-	_							toster wheeler
	Well ID: _	SFL	MW-	6			Initial D	epth to Wa	ter:	8.8	9 1	
	Sample ID			licate ID: _			Depth t	o Water afte	er Samp	ing;_	22	.96
	Sample D						Total D					
				06/150			Well Dia					
				Gi box	15	reek	1 Casin	Volume	e:			
	-	5-2 <u>5</u>	_				(Circle	Valuma				
	Sampled I			7/1 6	44.		(Circle		volume	es:		
	Method of Method of			sible P	- AND		Total Ca Volume	iole :				
	Time Intake Rate (ml/min) Cum. Vol. (gal.)			Temp.	pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	on ai (c	olor, t	Remarks urbidity, and sediment)	
-	ISIA Low	Flow Stabl	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10	% A	Tu 1	
4		1220	175		27.0	5 3.90	12,8	3.17	346		171	Light tan
	1517	22,0	1		27,4	2 3,89	12.7	3.92	350		73	11 11
522	Wallson St.	22.0	V	a.5	26.7	6 3.84	12.8	4.50	366	-	67	Clearing up
	<u>1527</u>	23,00	Dample	5	Tak	/						3 1
			<u> </u>		IMA							
-												
-												
-			·							\perp		
-										_		
-												
					30/00 Back 100							
				pH CALIB	RATION	(choose two)				Mod	el or U	Init No.:
	Buffer Solu				pH 4.0	pH 7.0	pH 10.0		_			
ļ	Field Temp	erature °C										
	Instrument	Reading										
		SPEC	IFIC ELEC	CTRICAL C	ONDUCT	ANCE (SEC)	- CALIBRATIO	ON		Mode	el or U	Init No.:
	KCI Solution	n (μS/cm=μ	mhos/cm)			1413 at 25°C	12880 at 25°	c				
	Field Temp	erature °C										
	Instrument i	Reading										
Ī	Errinse (ORP/REDO	X CALIBR	RATION	Jan 19	DISSOLV	ED OXYGEN	CALIBRATI	ON	Note	s: 🕌	a Pulled
	Standard Solution (mV)					Altitude / Salii	nity %			Pum		1 of f billion
	Field Temperature °C					Field Temperature °C						The state of the s
	Instrument Reading (mV)					Instrument Reading (mg/L)				Fin	-1	2 liter
	Model or U	nit No.:				Model or Unit No.:					1 1 On	ly /3 full

A EQBK 8-25 taken @ 1615



			. 4							wheeler
Well ID: _	5	SP/AP						er:	-	
Sample ID			licate ID: _					r Sampling		0.10'
Sample D								: 43.a		
		//	150006			Well Dia	meter:	U		
			ibbons C	reck				Volume: _		
		17, 201	16			(Circle o				
Sampled						(Circle o		Volumes: _		
Method o	f Purging:	_ Subm	ersible				sing/Boreh	ole		
Method o	f Sampling	g: /ow	flow				s Removed			
Time	Time Depth (ml/min) (gal.)		Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	trical Dissolved Oxygen		(colo	Remarks r, turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	
1712	38'	175		25.52	6.06	8,09	1.15	1	1000 :	slightly cloudy, no dor
1717				25.69	6.07	8.12	1.03	-2	894	11 11 11
1722				25,24	6.06	8.11	Ø.80	Ø	494	beginning to clear up
1727				24.53	6.05	8.14	0.82	2	362	
1732				25.10	6.03	8.14	Ø.47	2	261	11
1737	V	V	3,5	25.34	6.03	8.13	Ø.43	2	258	11
-		<	1	/	11.	4.1				
		00	uple:	5 6	ollec	Ted				
			4							
	VI.									
	3-46	774	pH CALIB	RATION (d	hoose two)		N	lodel c	or Unit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °0	2								
Instrumen										
inotramon		CIEIC EI E	CTPICAL C	ONDUCTA	NCE (SEC)	– CALIBRATI	ON		Andal (or Unit No.:
VCI Calutia		μmhos/cm)			1413 at 25°C			N.	lodel c	or Unit No.:
					1413 at 25 C	12880 at 25				
Field Temp	1-1									
Instrument	C. W. C. W. C.	000 000 100	DATION		510001					
04	The state of the s	OX CALIB	RATION			VED OXYGEN	CALIBRAT	ION N	lotes:	
	Solution (m				Altitude / Sa					
	perature °(Field Tempe					
	t Reading	(mV)			Instrument Reading (mg/L)					
Model or I	Unit No.:			ı	Model or Un	it No.:				



						Wi leetel						
Well ID: _	SSP /	1W-2			Initial Depth to Water: 21.27							
Sample ID):	Dup	licate ID:			Depth to	Water after	r Sampling	: 33	.45		
Sample D	epth: 54	4.5'						: 46,9				
		67061				Well Dia	meter:	2"				
Project Na	ame: TA	MPA-G	ibbons Cr	eek				Volume:				
Date:	ctober)	18,2016				(Circle o						
Sampled	By:	4			4 Casing/Borehole Volumes: (Circle one)							
			ersible pu	imp			asing/Boreh			1		
Method o	f Sampling	: low	tlow			Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU			
9:02	44.5	175		23.43	5.21	9.92	Ø.28	104	1000	Cloudy no odor		
9:07		1		23.85			Ø. 25	97	744	11 11		
9:12	V	V	≈1.0	23.89			Ø.24	92	521	clearing up		
		-			11					7		
			mples		o/le	Creq						
Buffer So	lution		pH CALIB	RATION (choose two			N	lodel or	r Unit No.:		
		2		pi14.0	pi 17.0	pri 10.0						
	nperature °(+			-				
Instrumer	nt Reading	e a surficience de	LE SKATOR RE									
				ONDUCTA	Service of the service of) – CALIBRATI		Λ	Model o	r Unit No.:		
KCI Soluti	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	i°C					
Field Temperature °C												
Instrument Reading												
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TION N	lotes:			
Standard Solution (mV)					Altitude / Sa	alinity %						
Field Temperature °C					Field Tempe	erature °C						
Instrument Reading (mV)					Field Temperature °C Instrument Reading (mg/L)							
Model or Unit No.:					Model or Unit No.:							



					wneeler							
	SSP MU				Initial Depth to Water: 27,30							
			licate ID:					r Sampling		.78'		
	epth: <u>¾45</u>							: 48,2				
7			150060			Well Dia	meter:	2"				
Project Na	ame: TN	IPA - Gil	bbons Cr	eek				Volume: _				
Date:	october 1	18,2016	,			(Circle o		AM COL				
Sampled	By: <i>5/</i> ^	4			4 Casing/Borehole Volumes:(Circle one)							
Method o	f Purging:	subme	rsible				sing/Boreh	ole				
Method o	f Sampling	: 10w f	low				s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks r, turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU			
1008	45.5	2200		24.50	4.32	8.73	Ø.24	268	1000	Cloudy ino ador		
1013	1	1		24.78		8.68	Ø.25	271	743			
1018				24.89		8.64	Ø.84	274	451			
1023	V		2.5	24.72		8.66	Ø.76	274	266	Crearing ap		
7000	-		4.5				7.70		000			
•		Da	mules	('0	Hect	ed -						
			PI		,							
										-		
									-			
				/								
		4										
			pH CALIB	RATION (choose two)	The second second	Λ	lodel or	r Unit No.:		
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				- " - " - 0 0 0		
Field Ten	nperature °(С										
Instrumer	nt Reading											
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC) – CALIBRATI	ON	N	Model or	r Unit No.:		
KCI Soluti			2 0 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1413 at 25°C					210011200		
KCI Solution (μS/cm=μmhos/cm)							2					
Field Temperature °C Instrument Reading												
					DISCOL	VED OVVCEN	CALIBRAT	TION I	latani			
ORP/REDOX CALIBRATION						VED OXYGEN	CALIBRA	IION I	Notes:			
Standard Solution (mV)					Altitude / Sa		-					
Field Temperature °C					Field Temperature °C							
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or	Model or Unit No.:				Model or Unit No.:							



Well ID:	SSP	MW-4			Initial Depth to Water: 24,15						
		Dupl	licate ID:	SUP-1				r Sampling		2,21'	
	epth:							: 51.5'			
Project ar	nd Task No	6706	150060			Well Dia	meter:	2 "			
Project N	ame: _T/V	PA-Gib	bons Crea	ek				Volume: _			
Date:	October	18,2016				(Circle o					
Sampled	By: <u>51</u>	M				4 Casing (Circle of		Volumes: _			
		submer	A			Total Ca	nole				
Method o	f Sampling	: lowf	low				s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	ation- action central Remarks (color, turbidity, and se		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	1	
101	49	175		24.98	6.24	5,67	Ø.18	85	180	Stained; no odor	
1116				25,14		5.66	Ø.15	82	62.9	Stained; no odor	
1121	V	*	22	25,09	6.26	5,66	Ø.15	79	36.8	J	
		7		7 11	. 1						
	Jamples (cted						
			pH CALIB		hoose two	Samuel A. P. T.		N N	lodel o	r Unit No.:	
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0					
Field Ten	nperature °	0									
Instrumer	nt Reading										
SPECIFIC ELECTRICAL COND					NCE (SEC)	- CALIBRATI	ON +	N	/lodel c	or Unit No.:	
KCl Solution (μS/cm=μmhos/cm)					1413 at 25°C	12880 at 25	o°C				
Field Temperature °C											
Instrument Reading											
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TION I	lotes:		
Standard Solution (mV)				1	Altitude / Sa	linity %		1	Suplic	ate samples	
Field Temperature °C				ı	Field Temperature °C				take	/9	
Instrume	nt Reading	(mV)		1	Instrument Reading (mg/L)					1/	
Instrument Reading (mV) Model or Unit No.:				I	Model or Unit No.:				EQBK-101816 taken		



Well ID: _	APM	10-4			Initial Depth to Water:							
Sample II	D:	Dup	licate ID: _			Depth to	Water after	r Samplin	g: <u>/3.</u>	91'		
	epth: 💢					Total De	pth to Well	: 52.	8'			
Project a	nd Task No	6706	150060			Well Dia	meter: 2	11				
Project N	ame: Th	1PA - Gibb	ons Cree	k		1 Casing	g/Borehole	Volume: _				
Date:	October	18,201	6		(Circle one)							
	By:5				4 Casing/Borehole Volumes:(Circle one)							
Method o	f Purging:	Subme	ersible pu	imp	Total Casing/Borehole							
Method o	of Sampling	: lowf	on		Volumes Removed:							
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm) Dissolved Oxidation-Reduction Potential (mV) (color			(color	Remarks , turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10% NTU				
1344	×50'	\$200		26.37	5.70	4.80	Ø.13	84		Cloudy/brown; sulfur as		
1349	i	1		26.44		4.83	0,12	86		11 11 11		
1354	V	V	\$2,0	26.68		4.74	Ø.11	85	178			
			0	,	1	11	1	-		3.7		
			Dam	ples	Co	leet	ed					
								1				
	1	4	nH CALIB	RATION (choose two			-	Model o	r Unit No.:		
Buffer So	Jution		pri GALID		-				woder o	Official.		
				pH 4.0	pH 7.0	pH 10.0						
	nperature °	C										
Instrumer	nt Reading											
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC	- CALIBRATI	ON		Model o	r Unit No.:		
KCI Soluti	ion (μS/cm=	-μmhos/cm)			1413 at 25°C	12880 at 25	i°C					
Field Tem	perature °C											
Instrument Reading												
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TION	Notes:			
Standard Solution (mV)					Altitude / Sa	linity %						
Field Temperature °C					Field Tempe	erature °C						
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or Unit No.:					Model or Unit No.:							



Well ID: _	APN	1W-5			Initial Depth to Water: _/0,86							
			licate ID:		Depth to Water after Sampling: 11.76							
Sample De	epth: 💥	40.5'						: 43.				
Project an	d Task No	.: 670E	150060					2"				
Project Na	ame: TA	nPA-Gi	bbons Cr	reek		1 Casin	g/Borehole	Volume: _				
Date:	October	18,2016	5			(Circle o						
Sampled I	By: <u>5</u> N	١				4 Casing (Circle of		Volumes: _				
Method of	Purging:	Subme	ersible p	ump		Total Ca	nole					
Method of	Sampling	: low f	low			Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTu	1. 11.		
1438	≈40.5	175		25.31	3.70	5.65	Ø.18	299	272	cloudy/It. tan Slight Sulfur odor		
1443		1		25.16	3.68	5,70	Ø.14	294	642	11 4		
1448	V	V	42,0	25.11	3,64	5.69	Ø.13	311	126	clearing up		
	- 5	ample	1	lec	11							
			nH CALIB	RATION	Choose two				Andal or	Lisit Mo.		
Buffer Sol	ution	4	pri CALID	pH 4.0	pH 7.0	pH 10.0		N	nodel or	Unit No.:		
	perature °(2		p114.0	p117.0	pi 110.0						
Instrumen												
instrumen		CIEIC ELE	CTRICAL C	ONDUCT	ANCE (SEC)	CALIDRATI	ON		Andel s-	Linit No.		
KCI Solutio				CNDUCT	1413 at 25°C	- CALIBRATI	2000		nouel or	Unit No.:		
KCI Solution (μS/cm=μmhos/cm)					1413 at 25 C	12000 at 25						
Field Temperature °C												
Instrument Reading				1	DISSOL	VED OVVCEN	CALIBBAT	TION .	late -			
ORP/REDOX CALIBRATION Standard Solution (mV)					Altitude / Sa	VED OXYGEN	CALIBRA	ION I	Notes:			
Standard Solution (mV) Field Temperature °C												
					Field Temperature °C							
Instrument Reading (mV) Model or Unit No.:					Instrument Reading (mg/L) Model or Unit No.:							



Depth (ml/min) (°C) (units) Conductance (ms/cm) Oxygen (mg/L) Color, turbid (mv)	
Total Depth to Well:	emarks dity, and sediment) dy/tan; sulfur of
Project and Task No.: 6706150060 Well Diameter: 2 Casing/Borehole Volume: (Circle one)	emarks dity, and sediment) dy/tan', sulfur of
Project Name: TMPA - Gibbons Creek 1 Casing/Borehole Volume: (Circle one)	emarks dity, and sediment) dy/tan', sulfur of
Date: October 18, 2016 Sampled By: BN	emarks dity, and sediment) dy/tan; sulfur of
Sampled By: Swb mersible pump Total Casing/Borehole Volumes: Circle one) Total Casing/Borehole Volumes Removed:	emarks dity, and sediment) dy/tan; sulfur of
Method of Purging: Submersible pump Method of Sampling: Jow How Time Intake Depth (ml/min) Low Flow Stabilization Criteria +/-3% +/-0.1 +/-3% +/-10% +/-10% NTU 1528 1528 26.13 5.91 2.00 \$\frac{1.99}{2.03} \frac{4.95}{2.13} \frac{1.99}{2.03} \frac{4.13}{2.03} \frac{6.96}{2.13} \frac{1.99}{2.03} \frac{4.13}{2.13} \frac{6.96}{2.04} \frac{6.96}{2.04} \frac{1.99}{2.03} \frac{6.96}{2.13} \frac{6.96}{2.04} \frac{6.96}{2.04	emarks dity, and sediment) dy/tan; sulfur of
Method of Purging: Submers ble pump Total Casing/Borehole Volumes Removed: Time Intake Depth Rate (ml/min) Cum. Vol. (gal.) Temp. (°C) pH (units) Specific Electrical Conductance (mS/cm) Dissolved (oxygen (mg/L)) Oxidation-Reduction (oxygen (mg/L)) Reduction (my/L) NTU 1593 40.5 150 25.98 5.90 1.99 \$\phi.33\$ 37 \$\phi.00\$	dity, and sediment) dy/tan; sulfur of
Nethod of Sampling: 10 to 1/0 to	dity, and sediment) dy/tan; sulfur of
Time Intake Depth (ml/min) (gal.) (°C) (mints) (oc) (mints) (color, turbid) (color, turbid) (mg/L) (mg/L) (color, turbid) (mg/L) (mg/L) (color, turbid) (mg/L) (mg/L) (color, turbid) (mg/L) (color, turbid) (mg/L) (mg/L) (mg/L) (color, turbid) (mg/L) (mg/	dity, and sediment) dy/tan; sulfur of
1523 40.5 150 25.98 5.90 1.99 \$1.33 37 \$1.50 \$1528 \$1 \$26.13 5.91 \$2.00 \$1.99 \$1.770 \$1.533 \$1.538 \$	11 11 11
1523 40.5 150 25.98 5.90 1.99 Ø.33 37 Ø.Ø elou 1528 26.13 5.91 2.00 Ø.19 41 770 1 1533 26.22 5.90 2.03 Ø.14 54 233 beg 1538 V 2.0 26.26 5.89 2.03 Ø.13 60 69.6 Damples Collected	11 11 11
1528 26.13 5.91 2.00 \$.19 41 770 1 1533 26.22 5.90 2.03 \$.14 54 2.33 be 1538 V 2.0 26.26 5.89 2.03 \$.13 60 69.6 Samples Collected	11 11 11
1533 26.22 5.90 2.03 Ø.14 54 233 be 1538 V 2.0 26,26 5.89 2.03 Ø.13 60 69.6 2.00	
1538 V V 2.0 26,26 5.89 2.03 Ø.13 60 69.6 Samples Collected	ginning to elect
Samples Collected	3
pH CALIBRATION (choose two) Model or Unit I	
pH CALIBRATION (choose two) Model or Unit I	
pH CALIBRATION (choose two) Model or Unit I	
pH CALIBRATION (choose two) Model or Unit I	
pH CALIBRATION (choose two) Model or Unit I	
pH CALIBRATION (choose two) Model or Unit	
New Assets I and Assets I and Assets I are a second as the	No.:
Buffer Solution pH 4.0 pH 7.0 pH 10.0	
Field Temperature °C	
Instrument Reading	
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION Model or Unit	No.
	INU.:
Field Temperature °C	
Instrument Reading	
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes:	
Standard Solution (mV) Altitude / Salinity %	
Field Temperature °C Field Temperature °C	
Instrument Reading (mV) Instrument Reading (mg/L)	
Model or Unit No.: Model or Unit No.:	



Sample Depth Duplicate Dr. Depth to Water after Sampling: Total Depth to Well: 13, 14	Well ID: _	APM	IW-3			Initial Depth to Water:						
Total Depth to Well H3.4' Well Diameter: 2'' Sampled By: Casing/Borehole Volumes Circle one A Casing/Borehole Volumes Color, turbidity, and sedimer Circle one A Casing/Borehole Volumes Color, turbidity, and sedimer Circle one A Casing/Borehole Volumes Circle one Circle				licate ID:			Depth to	Water after	er Sampling	:		
Project And Task No.: 6706/50060 Project Name: MPA - G/bons Creek Date: October /9, 2016 Sampled By: Method of Purging: Method of Sampling: Time Intake Depth (milrinin) Low Flow Stabilization Criteria Approx. The Acaing/Borehole Volumes: To Classing/Borehole Volumes: The Acaing/Borehole Volumes Record. The Ac							Total De	epth to Wel	: 43.4	1		
Date: October 19, 2016 Sampled By: Method of Purging: Total Casing/Borehole Volumes: (Circle one) Method of Sampling: Total Casing/Borehole Volumes Removed: Total Casing/Borehole Volumes Removed Total Casing/Borehole Volumes Removed: Total Casing/Bore	Project ar	nd Task No	6706	615006	6							
Date:	Project Na	ame:	MPA-	Gibbon	15 Cre	rek			Volume: _			
Method of Purging:	Date:	October	19,20	016								
Method of Purging:	Sampled	Ву:							Volumes:			
Method of Sampling: Time Intake Depth Rate Depth (mil/min) (mil/m	Method o	f Purging:							nole			
Time lintake Depth (ml/min) (al.) (c) Temp. (units) Conductance (ms/cm) Ph (units) Conductance (ms/cm) Potential (my/color) Potential P	Method o	f Sampling	g:				Volume	s Removed	i			
Model or Unit No.: PECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION KCI Solution (µS/cm=µmhos/cm) SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION Model or Unit No.: Model or Unit No.: Model or Unit No.: Model or Unit No.:	Time	The second second second second	N. J. China In The Manufacture Co.	THE RESIDENCE OF THE PARTY OF T		The state of the s	Electrical Conductance	e Oxygen Reduction (mg/L) Potenti (mV)		Remarks (color, turbidity, and sediment)		
# Unable to sample well asing is warped at approx. H below TOC. Pump gets Stuck. Stuck. PH CALIBRATION (choose two) Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION KCI Solution (µS/cm=µmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
Aprox. Holaw Toc. Rump gets Stack. pH CALIBRATION (choose two) Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION KCI Solution (µS/cm=µmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	0815	, ,	. /				0					
Aprox. Holaw Toc. Rump gets Stack. pH CALIBRATION (choose two) Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION KCI Solution (µS/cm=µmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	A	Un	able	10 5	ample	well	· Cas	ing is	Wa	ped at		
pH CALIBRATION (choose two) Buffer Solution Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (µS/cm=µmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	7.				, ,			J				
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C		appr	ox.	4'	bela	300	70C	0	ump	gets		
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C Field Temperature °C Model or Unit No.:		<i>c</i> 1	1									
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C		37	uck.	,								
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C			155.96	pH CALIB	RATION (choose two)	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	ı	Model or Unit No.:		
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	Buffer So	lution			pH 4.0							
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C	Field Tem	nperature °(0									
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C												
KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C			CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC)	– CALIBRAT	ION		Model or Unit No.:		
	KCI Soluti											
Instrument Reading												
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes:						DISSOL	VED OXYGEN	CALIBRA	TION	Notes:		
Standard Solution (mV) Altitude / Salinity %												
Field Temperature °C Field Temperature °C												
Instrument Reading (mV) Instrument Reading (mg/L)												
Model or Unit No.: Model or Unit No.:												
		Model of Other No										



		MW-			Initial Depth to Water: 14,99'							
Sample ID	:	Dup	licate ID: _	DUP-2	2	Depth to	Water after	r Sampling	16	.95'		
Sample D	epth: 🌋	40'				Total De	pth to Well	: 42.	7'			
Project an	d Task No	o.: 67061.	50060			Well Dia	meter:	2"				
			bons Cre					Volume: _				
Date:	ctober	19,2016				(Circle o						
					4 Casing/Borehole Volumes:(Circle one)							
Method of	Purging:	<u>Submer</u>	sible pun	Total Casing/Borehole								
Method of	Sampling	1: _/on	flow			Volumes	Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU			
0853	40	\$250		23,33	6.20	8.05	0,26	-14		It. tan; slight sulfar od		
0858	1	1		23,38		8.10	Ø.15	-7	48	clearing up		
0903				23.42		8.12	9.11	-4	22.5	clear		
0908				23.46		8.13	9.08	-3	6.5			
0913	V	V	23,5	23.48	6.18	8.14	\$.08	-1	Ø.Ø			
		6	1		TL	-						
) a	mple.	5 ,	ak	en						
1												
					1							
			pH CALIB	RATION (c	hoose two)		N	lodel o	r Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °0	0										
Instrumen	t Reading									- 4		
		CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON		Model o	r Unit No.:		
KCI Solutio		μmhos/cm)			1413 at 25°C				7777			
Field Temp												
	Water Control			+								
Instrument Reading ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TON A	lotes:			
Standard Solution (mV)					Altitude / Sa		JALIDIAI	27. 27. 20. 20.		2 +1-		
Field Temperature °C									DUT-	-2 taken		
					Field Temperature °C							
Instrument Reading (mV) Model or Unit No.:					Instrument Reading (mg/L) Model or Unit No.:							
Model of Unit No.:				Model of Official.								



										AALIGETEI			
Well ID: _	SFLI	MW-3			Initial Depth to Water:								
Sample ID):	Dup	licate ID:										
Sample D	epth:	25.5'				Total De	pth to Well	: 28.	2'				
Project ar	nd Task No	D.: 670 6	150060			Well Dia	meter:	24					
Project Na	ame: TN	NPA-G	ibbons Cr	reek		1 Casing/Borehole Volume:							
Date:	ctober	19,2016				(Circle o							
	By: _ 5M				4 Casing/Borehole Volumes:(Circle one)								
Method o	f Purging:	Subme	rsible pun	up.	Total Casing/Borehole								
Method o	f Sampling	g: low f	low			Volumes Removed:							
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)				n (color turbidity and codiment)				
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU				
10/2	₹25.5	175		24.28	3.68	7.52	1.52	327		Redish-brown in odor			
1017				24.35		7.47	Ø.28	337	1000	11 11 M			
1022				24.69		7.46	Ø.14	341	410	clearing up			
1027				24.66		7.43	\$.08	357	262	11 11			
1032				24.61		7.43	Ø.Ø5		77	11 11			
1037	V	V	22.75	24.66		7.44	9.04		34	clear			
		6	1	,	-	1							
Dample				5	Va	Ken							
			1										
	ATOM TO BE		pH CALIB	RATION (c	hoose two)		N	Nodel or	Unit No.:			
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0							
Field Tem	nperature °(C											
	nt Reading	<u> </u>											
		CIEIC ELE	CTRICAL C	ONDUCTA	NCE (SEC) – CALIBRATI	ON	1	Andel or	Unit No.:			
VCI Soluti		-μmhos/cm)	Hard Colors, By		1413 at 25°C	No. 50 Access 2015, 5	2 December 2			Silit No.			
					1710 at 20 C	, 12000 at 25							
	perature °C)											
Instrument Reading								34.26					
ORP/REDOX CALIBRATION						VED OXYGEN	CALIBRAT	IION I	Notes:				
Standard Solution (mV)					Altitude / Sa								
Field Temperature °C					Field Temperature °C								
Instrument Reading (mV)					Instrument Reading (mg/L)								
Model or Unit No.:					Model or Unit No.:								



	4 - 44										
Well ID:	SFLI	MW-2			Initial Depth to Water:						
Sample ID	:	Dup	licate ID: _			Depth to	Water after	r Sampling	: 13,	69'	
Sample De	epth: 🔌	21'				Total De	epth to Well	: 23.6			
Project an	d Task No	6706	150060			Well Dia	meter:	2 44			
			bons Cr	eek				Volume:			
Date:)ctober	19,2016				(Circle o	01.	a.			
Sampled B						4 Casing (Circle of		Volumes: _			
			sible pu	mp	-	Total Ca	nole				
Method of	Sampling	j: 10w t	low			Volume	s Removed	·			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	s) Conductance (mg/L) Reducti (mS/cm) (mg/L) Potenti (mV)			(color turbidity and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU		
1335	wa1'	175		26.97	6,00	11.2	0,57	217		It. tan; no odor	
1340	1	1		27,26		11.3	Ø.31	206	242		
1345				27.34		11.4	Ø. 21	198	120	clear	
1350	V	V	21,5	27,37	6.11	11.4	0.19	189	68	u	
_		-0	1		-1						
		00	emple	5	ak	en					
			1								
									-		
			pH CALIB	RATION (c	hoose two			N	lodel or	Unit No.:	
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0					
Field Tem	perature °(2									
Instrumen	177 1011										
modulien		CIEIC ELE	CTRICAL C	ONDUCTA	NCE (SEC)	– CALIBRATI	ION		Andal or	Unit No.:	
		N.C. ESLANDS		2.00				I.	nouel of	Offic No	
		μmhos/cm)			1413 at 25°C	12880 at 25	, C				
Field Temp	perature °C)									
Instrument Reading											
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TION N	Notes:		
Standard Solution (mV)				/	Altitude / Sa	linity %					
Field Temperature °C				F	Field Tempe	erature °C					
Instrument Reading (mV)				1	Instrument Reading (mg/L)						
Model or Unit No.:				1	Model or Unit No.:						



				miccici				
Well ID: SFL MW-5	Initial Depth to Water: 16,22							
Sample ID: Duplicate ID:	Depth to Water after	er Sampling	: 20	.24°				
Sample Depth: <u>♣ 22</u>	Total Depth to Well Well Diameter:	: 24.3	/					
Project and Task No.: 6706150060	Well Diameter:	2"						
Project Name: TMPA - Gibbons Creek	1 Casing/Borehole	Volume: _						
Date: October 19, 2016	(Circle one)							
Sampled By: 5M	4 Casing/Borehole Volumes:(Circle one)							
Method of Purging: <u>Submersible pump</u>	Total Casing/Borel	nole						
Method of Sampling:low How	Volumes Removed							
Time Intake Depth Rate (ml/min) Cum. Vol. (gal.) Temp. (°C) (units)	(mS/cm) (mS/L) Potential (mV)			Remarks turbidity, and sediment)				
Low Flow Stabilization Criteria +/- 3% +/- 0.1	+/- 3% +/- 10%	+/- 10%	NTU					
1420 \$22 200 25.79 4.79	12.4 0.56	249	101	M. straw Stain;				
1425 25.87 4.71	12.4 0.43		12.5	clear				
1430 V V X2.0 25,94 4.70	12.4 0.39	272	Ø.9					
Damples lake	n							
pH CALIBRATION (choose tw		N	Nodel or	Unit No.:				
Buffer Solution pH 4.0 pH 7.0	pH 10.0							
Field Temperature °C								
Instrument Reading								
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION	1	Model or	Unit No.:				
KCI Solution (μS/cm=μmhos/cm) 1413 at 25°	12880 at 25°C							
Field Temperature °C								
Instrument Reading								
ORP/REDOX CALIBRATION DISSO	VED OXYGEN CALIBRAT	TION I	Notes:					
Standard Solution (mV) Altitude / S	alinity %							
Field Temperature °C Field Temp	erature °C							
Instrument Reading (mV) Instrument	Instrument Reading (mg/L)							
Model or Unit No.: Model or U	nit No.:							



						3 1 1						
Well ID: _	SFL	MW-	6		Initial Depth to Water:							
			licate ID: _			Depth to	Water after	r Sampling	20	.65		
Sample De	epth: 🌉	22	(: 23.	/			
Project an	d Task No	6706	150060			Well Dia	meter:	2"				
Project Na	ame: TN	APA - Gil	bons Co	eek				Volume:				
Date:	Octobe	r 19,20	16			(Circle o						
Sampled B	Ву:В	4				4 Casing (Circle of		Volumes: _				
			sible pu	unp			asing/Boreh			- 4		
Method of	Sampling	: low 7	You			Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	lectrical Dissolved Oxidat Oxygen Reduction			n (color turbidity and sedimont)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTu	1		
1502	22'	150		26.39	4.12	13.7	1.66	360	Ø.0	cloudy/brown;		
1507		1		27.03		13.7	1.41	364	961	u u		
1512				27.36		13.8	1,27	372	505	clearing up		
1517	V	V	1.0	27.66		13.8	1.27	378	227	11		
		-3	1		11	1 /						
		Sam	oles									
Duffer Cal			pH CALIB		choose two			N	lodel or	Unit No.:		
Buffer Sol				pH 4.0	pH 7.0	pH 10.0						
	perature °	C										
Instrumen	t Reading	****										
	SPE	CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC) - CALIBRAT	ION	N	lodel or	Unit No.:		
KCI Solution	on (μS/cm=	-μmhos/cm)		1413 at 25°0	12880 at 25	5°C					
Field Tem	perature °C											
Instrument	t Reading											
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	TION N	lotes:			
Standard Solution (mV)					Altitude / Sa	alinity %		-	jet pu	imp at one (1) foot		
Field Temperature °C					Field Temp	erature °C		A	bove to	imp at one (1) feet ote (depth due to last		
Instrumer	nt Reading	(mV)			Instrument	Reading (mg/L))					
Instrument Reading (mV) Model or Unit No.:					Model or Unit No.:				of volume and drawdown			



Well ID:	SSP/X	P.Mu	-1		Initial Depth to Water: 7.04				
Sample ID):	Dupl	icate ID: _		-				:11.92'
Sample D	epth: 5	B'					pth ® Well		
Project an	nd Task No	: 6700	15.00	060		Well Dia	meter: 2		
Project Na	ame: Tr	1PA							
Date: 12	.20.2	16				(Circle o			
Sampled I	Ву: 1.5	STEVE	45			4 Casing (Circle of	g/Borehole	Volumes: _	
Method of	Purging:	SUR 3	BMP				nsing/Boreh	ole	
		LOW F					s Removed		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)
Low	Flow Stabi	lization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	ATU/
1351	38	150		19.59	6.51	8.83	28.5	4	104/crowsy/ eviatto
1356	38	150	-	20.43	6.05	8.76	3.8	-14	583/CLANDY/UNSTABLE
1401	38	150	_	20.84	6.01	8.68	2.5	-20	>1000 CLONDY (UP & DOWN)
1406	38	150		20.89	6.01	8.70	0.0	-22	882/CLOUDY
1411	38	150		2144	6.01	8.56	0.0	-21	794/cc004
1416	38	150	1/2	21.89	6.01	8.54	0.0	-21	908/62004
1417	BEC	and co	DUECTI	الم عمل	MPLE	5			
- " - "			pH CALIB		choose two)		,	N	lodel or Unit No.:
Buffer Soli				pH 4.0	pH 7.0	pH 10.0			
Field Tem	perature °C								11
Instrumen	t Reading								
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATIO	NC	N	lodel or Unit No.:
KCI Solution	on (μS/cm=μ	umhos/cm)			1413 at 25°C	12880 at 25°	C		
Field Temp	erature °C								
Instrument	Reading								
	ORP/RED	OX CALIBR	RATION		DISSOL	/ED OXYGEN	CALIBRAT	ION N	lotes:
Standard	Solution (m	V)		P	Altitude / Sal	inity %		T	SPENDITY LEVER
Field Tem	perature °C			F	ield Tempe	rature °C			EVELED OFF.
Instrumen	t Reading (mV)		1	Instrument Reading (mg/L)			le	HEER METER OF.
Model or U	Jnit No.:			N	Model or Uni	t No.:			



Well ID:	SP.Y	1W.Z				Initial De	epth to Wat	er: 22.	04
Sample D	epth: ~ 4	4.5	licate ID: _				epth ® Well		
			15.00				meter: 2		
Project Na	ame: TT	PA				1 Casing	g/Borehole		
Date: \	.20.2	016		Sec		(Circle o	one)		
Sampled	Ву:	STEVE	= als			4 Casing (Circle of	g/Borehole	Volumes: _	
Method o	f Purging:	SUBT	SMP				nsing/Boreh	ole	
Method o	f Sampling	LOW :	FLOW				s Removed		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	
1548	44.5	150		21.24	5.45	9.88	1.83	30	4000/ EULODOR KLOUDY
1553	44.5	150	_	21.47	5.00	9.94	0.04	76	×1000/CL0004
1558	44.5	150		21.52	- 5.02	9.93	0.00	73	872/c2000y
1603	44.5	150		21.55	5.03	9.92	0.00	72	704/c0004
1608	44.5	150	11/2	21.50	9.03	9.90	0.00	72	648/crowdy
1610	BEG	and co	clear	Not :	SAMPL	E S			
			pH CALIB	RATION (choose two)			N	lodel or Unit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0			
Field Tem	perature °C						7		
Instrumen	t Reading								
	SPE	CIFIC ELEC	TRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATION	ON	N	lodel or Unit No.:
KCI Solutio	on (μS/cm=μ	umhos/cm)			1413 at 25°C	12880 at 25°	°C		
Field Temp	perature °C								
Instrument	Reading								
	ORP/RED	OX CALIBR	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION N	otes:
Standard	Solution (m	V)			Altitude / Sali	inity %			
Field Tem	perature °C				Field Temper				
Instrumen	t Reading (ı	mV)			Instrument Reading (mg/L)				
Model or l	Jnit No.:				Model or Unit No.:				



Well ID:	SSP.Y	W. 3			Initial Depth to Water: 27.63							
Sample II):	Dup	licate ID: _									
	epth: ~ 4					Total De	epth do Well	48.2				
Project a	nd Task No	6700	15.00	260		Well Dia	ameter: 🔼					
Project N	ame: T	PA						Volume: _				
Date: 12	-20.2	016				(Circle o						
Sampled	Ву: 📉 🤾	STEVE	= Ls			4 Casing/Borehole Volumes: (Circle one)						
Method o	f Purging:	SUB	+OM+	>		Total Casing/Borehole						
Method o	f Sampling	Low!	FLOW				s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, tyrbidity, and sediment)			
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
1703	45.5	150		21.38	3 4.56	8.49	1.21	184	0.0/a004/No			
1708	45.5	150		21.00	4.27	8.44	D.08	239	0.0/ SUGHTLY			
1713	45.5	150		21.21	4.17	8.41	0.00	263	0.0 SUGHTLY			
1718	45.5	150	13/4	21.20	24.16	8.39	0.00	266	0.0/ GLIGHTLY			
1720	BEE	real c	OUEZ	TINC	SAT	1PLES						
1750	Cod	ECTE	DEO	DIPM	ENT P	KAOK						
		EQE	SK.M.	PS-1	22016							
									~			
			pH CALIB	RATION (choose two			N	lodel or Unit No.:			
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0			1 - 4 - 5 - 7 - 7 - 7			
Field Tem	perature °C											
Instrumen	t Reading											
	SPEC	CIFIC ELEC	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON	N	lodel or Unit No.:			
KCI Solution	on (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Tem	perature °C											
Instrument	Reading											
	ORP/RED	OX CALIBI	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION N	lotes:			
Standard	Solution (m	V)			Altitude / Sal	inity %		~	COLITER READING			
Field Tem	perature °C				Field Tempe	rature °C	0	CONTU-WATER				
Instrumer	it Reading (i	mV)			Instrument Reading (mg/L)							
Model or	Unit No.:				Model or Unit No.:							



Well ID:	KP. 174	1.3				Initial De	epth to Wat	or: 10 5	12
Sample ID):	— Dup	licate ID:	JP. Z					:11.02
Sample D	epth: ~ 4	-l`				Total De	pthate-Well	43.4	3.4.
Project an	d Task No	:67d	2.15.	0060			meter: 2		
Project Na	ame: 1	TP4				1 Casing	g/Borehole	Volume:	
Date: 12	:21.20	16				(Circle o			
Sampled I	Ву: 11.	STEVE	علد			4 Casing (Circle of	g/Borehole	Volumes: _	
Method of	Purging:	PERI	PUM	2			using/Boreh	ole	
Method of	Sampling	how!	FLOW				s Removed		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	
0859	41	150	_	19.79	5.0b	1.81	0.80	108	4.2 kiane 0000
0904	41	150	_	20.30	5.11	1.79	0.11	131	34/CLEAR
0909	41	150		20.38	5.13	1.77	0.00	112	27/CLEAR
0914	41	150	1/2	20.71	5.11	1.76	0.00	107	2.8/CLELL
0916	BEC	não (COULEC	TING.	SAMI	RES			
0950	00	P. 2	code	ECPE					
		_							
			nH CALIB	PATION (c)	hoose two)			1	ladal an Half Ma
Buffer Solu	ıtion		PHOALID	pH 4.0		pH 10.0		IV	lodel or Unit No.:
	perature °C			pi 1 4.0	pi17.0	pri 10.0			0.114
Instrument									
mstrumen		CIEIC EL EC	STRICAL CO	ONDUCTAL	ICE (CEC)	CALIDDATI	211		Cartesian
KOLO-listia			I RICAL CO			- CALIBRATIO		IV	lodel or Unit No.:
KCI Solutio		umnos/cm)		1	413 at 25°C	12880 at 25°	C		
Field Temp	7 2 2 2 2 2								
Instrument									
0		OX CALIBR	RATION			ED OXYGEN	CALIBRATI	ION N	otes:
	Solution (m				Ititude / Sali				
Field Temperature °C Instrument Reading (mV)					ield Temper				
		mV)	A		Instrument Reading (mg/L)				
Model or U	unit No.:			M	Model or Unit No.:				



									ANTICCICI		
Well ID:	SPL.T	7W.6			Initial Depth to Water: 17.41						
Sample II	D:	Dup	licate ID: _						1: 24 .09		
Sample D	epth: 2	23'				Total De	epth to Well	25.0	08		
Project ar	nd Task No	.:670	6-15-	000		Well Dia	meter: Z	-			
Project N	ame: T	PS					g/Borehole	Volume: _			
	-21.2		1			(Circle o					
		Stev6				4 Casing/Borehole Volumes: (Circle one)					
Method o	f Purging:	REPL	FOMP				sing/Borel	ole			
Method o	f Sampling	: Low F	Tow				s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
1215	23	150		24.44	4.00	12.3	1.57	327	79.4 CLEMP DOOR		
1220	23	150	_	24.10	3.93	12.4	0.59	390	54/CLEAR		
1225	23	150	_	24.02	3.92	12.5	0.52	396	3.9/CLEAR		
1230	23	150	1	23.98	3.92	12.5	0.48	397	2.9/CLEAR		
1232	Pac	Lac	code	ZTIN	TAC P	1000					
	-										
1315	Ea	DATE	FR	Ant (COLEC	FED					
	ta	BK.T	1PS.12	22116							
			pH CALIB	RATION (choose two)				lodel or Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0		5	LE STUMWS		
Field Tem	perature °C		-					S	AN CONTRACT		
Instrumen	t Reading								* ECOLO		
	SPE	CIFIC ELEC	TRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or Unit No.:		
KCI Solution	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C				
Field Temp	perature °C										
Instrument	Reading										
	ORP/RED	OX CALIBR	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION N	lotes:		
Standard	Solution (m	iV)		1	Altitude / Sal	inity %					
Field Tem	perature °C)		F	Field Temperature °C						
Instrumen	it Reading (mV)		1	Instrument Reading (mg/L)						
Model or I	Unit No.:			ı	Model or Unit No.:						
				-							



		44	1					24	-39	wheeler		
	-	MWL						er:		24,30		
Sample ID	:	Dup	licate ID: _			Depth to	Water after	er Sampling	j: <u>46</u>	167		
Sample De	epth:	0-0		/ ^		Total De	pth to Well	:				
Project an	d Task No	.: 6700	6 15006	14	A. (Well Dia	meter:	2				
Project Na Date:			bbans C	reck i	MINE	1 Casing/Borehole Volume:(Circle one)						
Sampled I	Ву: <u></u>	M				4 Casing/Borehole Volumes:(Circle one)						
Method of	Purging:	Man:	590n			Total Casing/Borehole						
Method of	Sampling	: Low	low			Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Electrical Conductance Oxygen (mg/L) Potential Color turbidity			Remarks urbidity and sediment)		
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
1627		-250		22,46	5.70	11.2	0,92	105	234	Light yellow/Na ad		
1632				22,41	5,73	11,2	0,70	89	101			
1637				2260	2 5,74	11.1	0,54	77	46.8	Clearing Up		
1642				23,32	2 5,76	11.1	0.52	70	15.1	Cleaning		
1647		-1		23.2	5.76	11,1	0.43	69	16,3	Adjusted rump rate		
1652			5	23,40	5.78	11.0	0,40	66	16,5	1 /		
	D <	San	11=	1	1							
	V -	911	ples	4	YEN (3431	1				
						16	52		-			
						. 0	- ~					
			ph CALIB		choose two			N	Model or U	Jnit No.:		
Buffer Sol				pH 4.0	pH 7.0	pH 10.0						
	perature °C											
Instrumen												
	SPE	CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC)	- CALIBRATI	ON	N	Model or U	Jnit No.:		
KCI Solution	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Temp	oerature °C											
Instrument	Reading											
	ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	TON	Notes:			
Standard	Solution (m	ıV)			Altitude / Sa	linity %						
Field Tem	perature °C				Field Temperature °C							
	t Reading ((mV)			Instrument Reading (mg/L)							
Model or l	Unit No.:				Model or Unit No.:							
				- 1								



Well ID:	AP-M	.15				1-141-1 D		- 11	00	wheeler		
			licate ID: _	Dun-	1	Initial Depth to Water: Depth to Water after Sampling: 1 27 after						
	epth:		ilicate ID: _	V OF	-				g:	Dup 1		
Project a	nd Tack No	. 6101	6 150060	1		Wall Dia	epth to Well	711		15m 100		
Project N	ame. JW	PAC	bhans (- ren K	Mine					(MW O		
	2-21-16		Dhew?	70-71		1 Casing/Borehole Volume:(Circle one)						
	By: <u>50</u>					4 Casing/Borehole Volumes:						
		3 Marso	POA			(Circle one)						
		j:		flow		Total Casing/Borehole Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm) Dissolved Oxygen (mg/L) Oxidation- Reduction Potential (mV) Remarks (color, turbidity, and						
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTV	Caladodar		
0846		~ 250		21,53	3.42	5,51	0.74	346	443	Light ton/Na ado		
2851				2169	3.42	5,51	0.56	360	36.3			
2856				21,75	3,43	5,51	0,47	363	0,0	Mostly dear		
0901				21,60	3,43	5,52	0,46	364	0.0	Very clear		
0906			5	21.60	3.43	5,50	0.45	363	0.0			
	-	5	- 1		1	1/	20	90				
			ANPI	e5	10	ther (WU	106	2			
			,									
			»U CALID	DATION (-						ļ		
Buffer Soli	ution		ph CALIB		choose two			IV	lodel or Ur	nit No.:		
				pH 4.0	pH 7.0	pH 10.0						
	perature °C											
Instrumen												
			TRICAL CO			- CALIBRATIO	NC	N	lodel or Ur	nit No.:		
KCI Solution	on (μS/cm= _l	umhos/cm)			1413 at 25°C	12880 at 25°	С					
Field Temp	erature °C											
Instrument	Reading								A			
		OX CALIBR	RATION		DISSOL	ED OXYGEN	CALIBRATI	ON N	otes:	MP SPOOL.		
	Solution (m				Altitude / Sal			[A	ponky:	caused		
	perature °C					Temperature °C Me to sticks						
	t Reading (mV)		li li	nstrument R	ment Reading (mg/L)						
Model or Unit No.: Model or Unit No.:									agging bottom			
	of well											



Well ID:	AP-	MWH				Initial D	enth to Wat	er: 13 (24	Wifefel	
		Dupl	icate ID:			Initial Depth to Water: 13,04 Depth to Water after Sampling: 13.71					
Sample De	1777		loute ib				pth to Well			,	
		: 670	6 1500	60		Well Dia	meter:	2"			
Project Na	me:	MPA C	Fiblion	8 (100	ex Mine		g/Borehole				
Date:						4 Casing/Borehole Volumes:					
Sampled I	Зу:	55	Marion	0.0		(Circle d		-			
		:_ Lo	1 1	W			sing/Boreh				
Wethou of	Sampling		VV JI ()	W		Volumes Removed:					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		emarks dity, and sediment)	
Low	Flow Stabi	lization Cri	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTh		
1017		√250		21.15	5.44	4.81	0,52	123	666	Light brown	
1022				21,07		4.74	0.42	117	129	Methane Odor	
1027				21,41	5,45	4.72	0,38	112	60.7	Jan- cleaning	
1039				21,34	5,44	4,73	0,34	108	21,3		
1037			alv _	21,13		4,76	0,32	105	1.3	clearing	
1942			\$ 7	31,24	5.45	4.76	0.32	102	0,0	Nearly clear	
		_									
		-	amol	e5	tak	en la) 1	147			
	V	/0	runge		Jan	en Co	10	110			
					4					-	
			-U CALID	DATION	(-l				4 1 l - i t	New	
D. (1) O. I			PH CALIB		(choose two)			IV	Model or Unit	No.:	
Buffer Sol				pH 4.0	pH 7.0	pH 10.0					
	perature °C	;									
Instrumen											
				ONDUCT		- CALIBRATI		N	lodel or Unit	No.:	
KCI Solution	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			7	
Field Temp	oerature °C										
Instrument	Reading										
	ORP/RED	OX CALIBI	RATION		DISSOL	VED OXYGEN	CALIBRAT	TON N	lotes:		
	Solution (m				Altitude / Sal						
Field Temperature °C					Field Temperature °C						
	t Reading (mV)			Instrument Reading (mg/L)						
Model or t	Jnit No.:				Model or Unit No.:						



										wrieeler	
Well ID:	AP-	MW 11	>			Initial Depth to Water: 13.90					
Sample ID	:	Dup	licate ID: _			Depth to	o Water afte	er Samplin	ng:	13.88	20
Sample Do	epth:	(22				Total De	epth to Well				
		: 6706				Well Dia	meter:	8	۷′′		
Project Na Date:			blans	Creek	K Mine	1 Casing/Borehole Volume:(Circle one)					
Sampled I	Ву:	CM				4 Casing/Borehole Volumes:(Circle one)					
Method of	Purging:	55	Mons	901			asing/Borel	nole			
Method of	Sampling	: Lo	r f1	aw/			s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reductio Potentia (mV)	n (color tu	Remarks rbidity, and sediment)
Low	Flow Stabi	lization Cr	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		1	
1141		~250	650	22,55	5,62	2.12	0,80	78	593	Light Tan-	
1146				22,91		2,06	0,53	81	170	heavy methone	200
1151				22,6	35,63	2.07	0,44	309	383		
156				22,90	5.62	2,07	0,39	106	7.6	cleaning up (tolor
1201				22,93	5,63	2,07	0,35	102	2,7	1	
1206				23.05	5.63	2,07	0.32	115	0.7		
1311				23,14	5.64	2,07	0.31	119	0,0	Very dear	-
1216			5	23,19	5,64	207	0.31	121	0.0	adar still pre:	5en
										,	
						1	tak	en	a		
				1	Dan	ples	J-17 (17	1		
						1		12	16		
			pH CALIB	RATION (choose two)			Model or U	nit No.:	
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0					
Field Temp	oerature °C										
Instrument	Reading										
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATION	ON		Model or U	nit No.:	1
KCI Solutio	n (μS/cm=μ	umhos/cm)			1413 at 25°C	12880 at 25°	°C				
Field Temp	erature °C							The same			
Instrument	Reading		_								
QE EN	ORP/RED	OX CALIBR	RATION		DISSOL	/ED OXYGEN	CALIBRAT	ION	Notes:		1
Standard S	Solution (m	V)			Altitude / Sal	inity %					1
Field Temp	oerature °C				Field Tempe	rature °C					
Instrument	Reading (mV)		1	Instrument R	ent Reading (mg/L)					
Model or U	Jnit No.:				Model or Uni	t No.:					



Sample ID Sample Do Project an Project Na Date: Sampled I Method of	epth: ad Task No ame: 2 - 2 By: f Purging:	Dupl .: <u>6706</u> MP A C 1-16	1500 Sibbons	60	(Mne	Initial Depth to Water:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tu	Remarks rbidity, and sediment)
Low	Flow Stabi	lization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1504		-230		24.3	7 4,71	10.9	0.96	231	84.2	Slight ran
1509				24.53	4.65	10.9	0.66	245	41.0	MITTEL PLEINGING OF
1514				29,61	4,61	10.7	0,51	253	16.7	***
1519				24.6	4,59	10.9	0,44	261	61	
1524			1	24.61	4.55	10.0	0,38	270	1,3	
1529			4	24,69	4.53	11.0	0,41	276	0.0	
1534				24.67	4,50		0.39	282	0.0	
1539			5.	24,62	4,48	11.0	039	285	9,0	
	X 5	Sam	(6)	5	ake	in Ca		53.	9	
			pH CALIB	RATION (c	hoose two)			M	lodel or U	nit No.:
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C									_
Instrument	t Reading									
	SPE	CIFIC ELEC	TRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATION	ON	N	lodel or U	nit No.:
KCI Solutio	n (μS/cm= _l	umhos/cm)			1413 at 25°C	12880 at 25°	°C			
Field Temp	7									
Instrument		OV 041 ID	ATION		DISCOL	(ED OVECET)	0411557	1011		
Ctonderd		OX CALIBR	ATION			ED OXYGEN	CALIBRAT	ION N	lotes:	
Standard Solution (mV) Field Temperature °C					Altitude / Sali					
Instrument Reading (mV)					ield Temper					
Model or U		mv)			Instrument Reading (mg/L) Model or Unit No.:					



										wrieeler		
Well ID:	SFL-	MWZ			Initial Depth to Water: 11.71							
Sample ID):	Dupl	icate ID: _			Depth to	Water after	er Sampling	12,	72		
Sample D	epth:						epth to Well					
		: 670				Well Dia	meter:	2"				
		MAC	Sibbon	5 Crec	: K Mre	1 Casing/Borehole Volume:(Circle one)						
Sampled	12-27 By:	SCM				4 Casing/Borehole Volumes:(Circle one)						
Method of	f Purging:	55	MONS	acn			asing/Boreh	ole				
Method of	f Sampling	:	Law-	flow			s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks r, turbidity, and sediment)		
Low	Flow Stabi	lization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
0920		~250		22,28	6.54	22.6	0,60	178	520	Murky white		
0925				22.49	6,56	22.6	0.10	176	224	Nooder		
0930				22.75	6.55	22.6	0.00	175	23.4			
935				22.80		22,7	0,00	175	33.9	Clearing		
0940				22,88	6.54	22.7	000	176	16,0	Stightly		
0945			4.5	22, 96	6,55	22,8	0,00	177	2.7	Clearer		
Í												
					1							
			29	M	les	takon	(a)	1946				
	_		FOR	KI	*	1-10	1000	1112				
			-01	11 10	7 2	× 16/	ZM	JOINX	100	1910		
			pH CALIB	RATION (c	hoose two)			N	lodel or Unit	No.:		
Buffer Soli	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C											
Instrumen	t Reading											
	SPEC	CIFIC ELEC	TRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or Unit	No.:		
KCI Solutio	on (μS/cm=μ	umhos/cm)		1	1413 at 25°C	12880 at 25°	°C					
Field Temp	erature °C											
Instrument	Reading					ě						
	ORP/RED	OX CALIBR	RATION		DISSOL	/ED OXYGEN	CALIBRAT	ION N	otes:			
Standard S	Solution (m	V)		А	ltitude / Sal	inity %						
Field Temperature °C Field Temp						rature °C						
Instrument Reading (mV) Instrumen						nent Reading (mg/L)						
Model or U	Jnit No.:			N	lodel or Uni	t No.:						



	/-1	M1. 12			Initial Depth to Water: 17.6							
		MW3				Depth to Water: 17.70						
			licate ID: _]:	70		
Sample D	epth:	170	61500	10			epth to Well					
Project an	nd Task No	10 A C S	6 1 300	H V	Mlan			27				
Project Na	ame:	115 611	bong (reen	11415	1 Casing/Borehole Volume:(Circle one)						
-	12-29					4 Casing/Borehole Volumes:						
	By: <u> </u>		Mansa	24		(Circle one)						
			01				asing/Boreh					
wethod of	Sampling	:	7 100			Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tur	Remarks bidity, and sediment)		
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	_	1		
1100		~259		22,38	3.76	16.9	0.11	367	>1000	yellow-brown		
1105				22,43	3.74	17.0	0,00	369	>1000	No cool		
1110				22,42	3.74	17.0	0,00	371	533	cleaning slight		
1115				22,55	3.73	16.9	0,00	372	250			
1120				22,70	3,74	17.0	0.00	372	119			
1125				22,81	3.74	17.0	0,00	373	¥. 73. ⁴	Llearing Slightly		
1130	-		#	aa,72	3,73	17.0	0,00	374	36,7	clearing		
1135			4.5	22,74	3, 73	17.0	0.00	37 4	20.1			
				_		6 1						
			1	DAM.	oles	10/10	1/9)	1121				
			1	1011	PICS	1.100	1100	112	2			
									1			
			pH CALIB		hoose two)			IV	lodel or Ur	nit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				1.70		
Field Tem	perature °C	;										
Instrumen	t Reading											
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or Ur	nit No.:		
KCI Solution	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Temp	oerature °C											
Instrument	Reading											
	ORP/RED	OX CALIBI	RATION		DISSOL	/ED OXYGEN	CALIBRAT	ION N	lotes: N	Tu would		
Standard :	Solution (m	iV)		P	Altitude / Sal	inity %		1	not a	1		
Field Temperature °C Field T						Field Temperature °C than 19						
Instrumen	t Reading (mV)		- I	strument Reading (mg/L)							
Model or U	Jnit No.:			N	Model or Uni	t No.:						



Sample ID Sample D Project Ar Project Na Date: Sampled Method of	epth: nd Task No ame: [2-]3 By: f Purging: f Sampling	Dup	Mans Cum. Vol.	160 Krea	x Mine	Total Depth to Well: Well Diameter: 1 Casing/Borehole Volume: (Circle one) 4 Casing/Borehole Volumes: (Circle one) Total Casing/Borehole						
Time	Intake Depth	Rate (ml/min)	(gal.)	Temp. (°C)	pH (units)	Electrical Conductance (mS/cm)	Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, to	Remarks urbidity, and sediment)		
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	_	1		
1215		~250		2243	6.26	18.3	0.57	20	395	Tan/nothing co		
1220				22.61	6.48	18.2	0,00	-20	382	1211/2111111111111111111111111111111111		
1225				2279	645	18,5	0,00	-14	282			
1230				22.83	645	18,6	0,00	-6	65.7			
1235				22,81	6.44	18.6	9.00	-3		nearly clear		
1249			3	22, 88	6,45	18,6	0,00	-2	0.5	The aring cream		
		1	6	Zum	25	Falla	11/0	HIDE				
							C	124	01			
4			pH CALIB	RATION (c	hoose two)			N	lodel or L	Jnit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C									- 1		
Instrumen	t Reading											
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or U	Jnit No.:		
KCI Solutio	on (μS/cm= _l	umhos/cm)			1413 at 25°C	12880 at 25	°C					
	perature °C											
Instrument												
		OX CALIBR	RATION			ED OXYGEN	CALIBRAT	ION N	otes:			
	Solution (m				Ititude / Sali			A	Til	The An		
Field Temperature °C				F	ield Temper	rature °C		42	NO			
Instrument Reading (mV)				Ir	Instrument Reading (mg/L)				6			
Model or Unit No.:				V	lodel or Uni	t No.:				MAGA		



Well ID:	APM	W-3				Initial De	epth to Wat	er: 10.	49	
			licate ID:					er Sampling		.08
Sample De	epth: * L	11'	licate ID:					: 43.		
			150060			Well Dia	meter:	24		
			bbons Ci					Volume:		
Date:	Februar	20,2	017			(Circle o				-
Sampled E						4 Casing (Circle of		Volumes: _		
Method of	Purging:	per	istaltic				asing/Borel	ole		
Method of	Sampling	1: <u>/00</u>	o flow					:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks , turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1730	41'	225		19.86	5,06	1.81	2.43	177	29.0	Clear, no odor
1735	1	1		20.08	5.06	1.81	1.95	203	13.8	
1740				20.29	5.03	1.79	1.52	192	6,2	
1745				20,40	5.04	1.78	1,00	126	3,8	
1750				20.39	5.04	1.78	0,0	113	0,6	
1755	1	V	\$2.0	20.41	5.05	1.78	0,0	108	Ø.9	s V
				>	1	1				
				Dam	ples	/ak	en			
				1	/	1				
						4				
					1					
			pH CALIB	RATION (c	choose two)	المام	V	Model o	r Unit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °(0								
Instrumen	t Reading									
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ION	N	/lodel o	or Unit No.:
KCI Solutio	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	5°C			
Field Temp	perature °C	,								
Instrument										
The second secon		OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRA	TION I	Notes:	
Standard	Solution (n				Altitude / Sa	The second second				
	perature °				Field Tempe					
	t Reading					Reading (mg/L))			
Model or I		<u> </u>			Model or Un					



Method of Purging: Subsersable Method of Sampling: Los floor Los flo											wheeler
Sample Depth:	Well ID: _	APM	W-1D				Initial De	epth to Wat	er: <u>13</u> .	68'	
Project Name: TMPA Gibbons Creek	Sample ID);	Dup	licate ID:			Depth to	Water after	r Sampling	: 14	1.37'
Project Name: TMPA Gibbons Creek 1 Casing/Borohole Volumes	Sample De	epth:	11 × 41				Total De	epth to Well	: 43'		
Date: February 2 , 2017 Sampled By: PA				50060			Well Dia	meter:	710		
Method of Purging: Subversible Sampled By: A Casing/Borehole Volumes: Circle one)	Project Na	ame: TN	MPA Gib	bons Cree	ek				Volume: _		
Circle one Total Casing/Borehole Total Casing/Bo	Date:	February	21,2017						1112		
Nethod of Purging: Subversible Total Casing/Borehole Volumes Removed: Total Casing/Borehole Volumes Removed:									Volumes: _		
Note	Method of	f Purging:	_ subm	ersible					ole		
Time	Method of	f Sampling	1: 10w f	low							
Low Flow Stabilization Criteria	Time						Electrical Conductance	Oxygen	Reduction Potential	(COIOI,	turbidity, and sediment)
17.99 5.84 1.90 8.8 17 97.4 5 5 5 5 5 1.92 9.8 9.	Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
17.99 5.84 1.90 8.8 17 97.4 5 5 5 5 17.9	9:32	× 41'	u150		18.21	5.84	1,88	0.00	3.2	82.4	Slightly clauder
17.45 5.84 1.92 0.6 32 71.2 1/2 1/3		1	1							99.4	
1.5											9
PH CALIBRATION (choose two) Buffer Solution Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Altitude / Salinity % Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Altitude / Salinity % Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)									65.5		
pH CALIBRATION (choose two) Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (my/L) Notes:		V	V	\$1.5							
Model or Unit No.:	-			3 1	10.00	1	1			A 11 G	
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)			5	ampl	25	1a	Ken				
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Image: PH 10.0 PH				pH CALIB	RATION (choose two				Model or	· Unit No ·
Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mV) Instrument Reading (mg/L)	Buffer Sol	ution		pri ozialo				1		viodei oi	Offic No
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No.: Altitude / Salinity % Field Temperature °C Instrument Reading (mg/L)			2		pr1 4.0	pi 7.0	pri 10.0				
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No.: Model or Unit No.: Model or Unit No.: Altitude / Salinity °C Instrument Reading (mg/L)			<i>-</i>								
KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	Instrumen		200 1 7 7 7		-					2	
Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)		SPE	CIFIC ELE	CTRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATI	ION	N	Model or	Unit No.:
Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	KCI Solution	on (μS/cm=	μmhos/cm))		1413 at 25°C	12880 at 25	5°C			
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	Field Tem	perature °C)								
Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mg/L)	Instrument	t Reading									
Field Temperature °C Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)		ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	TION I	Notes:	
Instrument Reading (mV) Instrument Reading (mg/L)	Standard	Solution (n	nV)			Altitude / Sa	llinity %				
	Field Tem	perature °	С			Field Tempe	erature °C				
Model or Unit No.: Model or Unit No.:	Instrumer	nt Reading	(mV)			Instrument F	Reading (mg/L))			
	Model or	Unit No.:				Model or Ur	nit No.:	1			



Well ID: _	APN	1/11-5				Initial De	epth to Wat	or:	- /1	wheeler
			licate ID:				Water afte			The state of the s
Sample De			noate ib				pth to Well			4,16
			150060				meter:			
			bons Crea				g/Borehole			
			17			(Circle o		voidille		
Sampled I			k_l				g/Borehole	Volumes: _		
			mersible			(Circle o				
		: low	Λι				sing/Boreh Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color	Remarks , turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
11:06	241'	4200		19.72	3,79	5.37	0.0	3/4	544	H.tan ; nooder
11:11	1	T		19.95	3,77	5,45	Ø. Ø8		434	
11:16				20.09			Ø.ø	324	280	
11:21				20.12			\$.0	328	180	
11:26				20.21			Ø.Ø	331		clearing up
11:31	1	V	11.5	20.31	3.65	5,55	0.0	332	58.8	
-			3							
			Day	MOLE	8	Vak +	200			
				1)	1 ocite				
			pH CALIB	RATION (c	hoose two)		N	Model c	or Unit No.:
Buffer Sol	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °(0								
	nt Reading									
		CIFIC FLE	CTRICAL C	ONDUCTA	NCE (SEC) – CALIBRAT	ION	,	Model	or Unit No.:
KCI Soluti		μmhos/cm			1413 at 25°C				vioder (or offiction.
	perature °C)		1410 00 20 0	12000 at 20	, 0			
Instrumen					-					
modulien		OOX CALIB	PATION		DISSOI	VED OVVCEN	CALIBRA	TION	Madaai	
Standard	Solution (n		MATION		Altitude / Sa	VED OXYGEN	CALIBRA		Notes:	
	nperature °				Field Tempe				Tump	initially not working. pull it & take apart
	nt Reading					Reading (mg/L)	\		Had t	pull it & take apart
Model or		()			Model or Ur					



										wheeler
Well ID: _	APM	W-4				Initial De	epth to Wat	er: <u>/2.</u>	42'	
			licate ID:				Water afte			36'
Sample D	epth:	50'					pth to Well			
Project an	nd Task No	67061	50060			Well Dia	meter:	2"		
Project Na	ame: TN	MPA Gib	bons Cre	ek			g/Borehole	Volume: _		
Date:	February	21,201	7			(Circle o				
Sampled I	Ву:1	35				4 Casing (Circle of	g/Borehole	Volumes: _		
Method of	f Purging:	subn	nersible				ising/Boreh	ole		
Method of	f Sampling	j:	w flow				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	71700	
12:10	\$50	2250		19.69	5,55	4.89	5.26	10	27.2	Clear; no odor
12:15	1	1		19.91		4.89	3.66	24	7.6	
12:20				19.92		4.89	2.93	34	2.6	
12:25				19,95		4.88	2,30	38	0.0	
12:30				20.00		4.89	1.42	37	1.1	
12:35				19.98		4.85	Ø.98	35	Ø.0	
12:40	V	1	\$ 2.5			4.84	Ø.73	33	0.0	V
10.10	,			,		1	7	00	PIP	
			Dan	ples	5/0	ken				
										-
	1									
	-	egact.	pH CALIB	RATION (choose two)			Model o	r Unit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0	1			
	nperature °	^		pi i iio	pi i i i	pi 10.0				
		0								
msuumer	nt Reading	CIFIC EL E	OTDICAL C	ONDUCT	ANOF (SES)	011/25/	1011		NA DAY	The Professional Control of Contr
			2 12 24 4 12 24	ONDUCT		- CALIBRAT			wodel c	or Unit No.:
		-μmhos/cm)		1413 at 25°C	12880 at 25	5°C			
Field Tem	perature °C	2								
Instrumen	t Reading									
	ORP/REI	OOX CALIE	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:	
Standard	Solution (r	mV)			Altitude / Sa	llinity %		1	3:45 -	- Eabk-BJG-22117
Field Ten	nperature °	С			Field Tempe	erature °C				taken
Instrume	nt Reading	(mV)			Instrument I	Reading (mg/L)			
Model or	Unit No.:				Model or Ur	nit No.:				



Well ID: S	SP/AP	MW-1				Initial De	epth to Wat	er: 5,3	1'	wneeler
			icate ID:					r Sampling		.441
	epth:							43.		
		: 6706/	50060) 11		
			bons Cre	ek				Volume:		
Date:	February	21,201	7			(Circle o				
	Ву:В					4 Casing (Circle of		Volumes: _		
Method of	f Purging:	Subw	ersible				sing/Boreh	iole		
Method of	f Sampling	: 10W	flow				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1427	≈38′	\$250		22.01	5.62	8.69	\$.56	-10	76.4	It. tan ; no odor
1432	1			22.09	5.68	8.69	Ø.97	-18	112	Slight hydrocarmon oder
1437				22.10	5,67	8.68	Ø.Ø	-20	287	
1442				22.11	5.60	8.66	Ø.Ø	-19	328	
1447				22.16	5.59	8.68	Ø. Ø	-16	407	
1452	V	V	₩2.0	22.19	5.56	8.71	Ø.0	-13	432	V
			any	des		ake	n			
	1		12-10 THE WEIL TO				- continued so			
			pH CALIE		choose two			1	Model o	r Unit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	nperature °(C								
Instrumer	nt Reading									
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC) – CALIBRAT	ION		Model c	or Unit No.:
KCI Soluti	ion (μS/cm=	-μmhos/cm)		1413 at 25°C	12880 at 25	5°C			
Field Tem	perature °C									
Instrumen	nt Reading									
	ORP/RED	OOX CALIE	RATION		DISSOLVED OXYGEN CA			TION	Notes:	
Standard	Solution (r	nV)			Altitude / Sa	alinity %	1			
Field Ter	mperature °	С			Field Temperature °C					
Instrume	nt Reading	(mV)			Instrument Reading (mg/L)					
Model or	Unit No.:				Model or Unit No.:					



Well ID:	SSP M	W-2			Initial Depth to Water:						
Sample ID	;	Dupl	icate ID:			Depth to	Water after	r Sampling	: 37	.28"	
Sample De						Total De	epth to Well	: 46.0	7'		
Project an	d Task No	.: 6706	150060			Well Dia	meter: 🔌	u			
Project Na	ame:TA	MPA Gibb	ons Cree	h				Volume:		8	
Date:	February	21,2017	7			(Circle o					
Sampled E						4 Casing	g/Borehole one)	Volumes: _			
Method of	Purging:	Subr	nersible				asing/Boreh	iole			
Method of	Sampling	:low	flow					:			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)	
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
/535	244	\$250		21.66	4,79	10.1	\$.20	148	91.9	slightly cloudy; no odor	
1540	1	1		21.52		10,2	Ø.Ø	145	104	1	
1545	4			21.61		10.2	Ø.Ø	138	101		
1550				21,80		10.1	Ø. Ø	130	62.6	clearing up	
1555	V	V	×2.0			10.1	Ø. Ø	124	48.9		
			amp	le 5	7	ake	n°				
Buffer Sol	ution		pH CALIB	pH 4.0	choose two) pH 10.0	VEIDER	N	Model or	Unit No.:	
Field Tem	perature °(0									
Instrumen	nt Reading										
	SPE	CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC	– CALIBRAT	ION	N	Model o	r Unit No.:	
KCI Solution	on (μS/cm=	μmhos/cm)		1413 at 25°C	12880 at 25	5°C				
Field Tem	perature °C										
Instrumen	t Reading										
	ORP/RED	OOX CALIB	RATION		DISSOLVED OXYGEN CALIBRATION				Notes:		
Standard	Solution (r	nV)			Altitude / Salinity %						
Field Tem	nperature °	С			Field Temperature °C						
Instrumer	nt Reading	(mV)				Reading (mg/L	.)				
Model or	Model or Unit No.:				Model or Unit No.:						



Well ID: _	SSPA	160-4			Initial Depth to Water: 25, 06'						
Sample ID):	Dupl	licate ID: _	DUP	-1		Water after			691	
Sample D							pth to Well				
			5150060				meter:	011			
Project Na	ame: Ti	MPA Gi	bbons C	reek			g/Borehole				
Date:	Februar	y 21, 6	2017			(Circle o					
	Ву:		. 1			4 Casing (Circle of	g/Borehole one)	Volumes: _			
			mersible				asing/Boreh	ole			
Method of	f Sampling	j:	wflow				s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%			
1646	2491	≈ 250		21.42	5.90	5,77	1.15	74	31.8	Clear; no odor	
1651				21.51	5,93	5.77	Ø. Ø3	73	26.1	f	
1656				21.58	5.95	5.77	Ø.0	72	23.5		
1701	V	1	\$1.5	21059	5,95		Ø.Ø	72	22.0		
-				1	1		1				
			,								
			pH CALIB	RATION (choose two)		N. I	Model or	Unit No.:	
Buffer Sol	lution			pH 4.0	pH 7.0	pH 10.0					
Field Tem	perature °(2									
Instrumer	nt Reading										
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ION	1	Model or	Unit No.:	
KCI Soluti		μmhos/cm)		X * 2922 2327	1413 at 25°C					S.III. 140	
Field Tem	perature °C)									
Instrumen	t Reading										
	ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	TION I	Notes:		
Standard	Solution (n	nV)			Altitude / Sa	linity %	14		DO	IP-1 taken	
Field Ten	nperature °	C			Field Temperature °C				PU	Janen	
Instrumer	nt Reading	(mV)			Instrument Reading (mg/L)						
Model or Unit No.:					Model or Unit No.:						



						Initial De	enth to Wat	er. 26. 5	18		
					Initial Depth to Water: 26.581						
		Dup	licate ID: _			Depth to	Water after	er Sampling	: <u>30</u>	0.091	
Sample De	epth:v	145.5'				Total De	pth to Well	: 48.	21		
Project and	d Task No	: 6706	150060	>		Well Dia	meter:	2"			
			abons Cr	eek				Volume:			
Date:	Februar	4 22, 2	017			(Circle o					
Sampled E	By:	4				4 Casing (Circle of		Volumes: _			
Method of	Purging:	Sub	mersible					nole			
Method of	Sampling	: 10w	How			Total Casing/Borehole Volumes Removed:					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)	
Low I	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	14100		
09:12	\$45,5	×250	1	20.20	4.48	8.53	Ø .09	125	388	It. tan; no odor	
09:17				20.61	4.45	8.55	Ø.Ø	283	636	1 1an moodot	
09:22				20.89		8,56	Ø. Ø	282	370		
09:27				20.90		8.55	Ø. Ø	278	178		
09:32				20.90			0.0	273	99.8	Clearing up	
09:37			₩2.0	20.96			Ø. Ø	266	64.7	11	
							1		0 1.1	- U	
				am	1/00	1	Low				
			_	Jan		101					
		100	pH CALIB	RATION (c	hoose two)		111	Nodel or	Unit No.:	
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0					
Field Tem	perature °C)									
Instrument											
	100	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ION	1	Model or	r Unit No.:	
KCI Solutio		μmhos/cm)		-	1413 at 25°C		* 15		viodel of	One No	
Field Temp						12000 01 20		-			
Instrument					•						
		OX CALIB	RATION		DISSOL	VED OXYGEN	CVIIBDV	TION	Notes:		
Standard :	Solution (m				Altitude / Sa		SALIDKA	TION I	votes:		
	perature °(-			Field Tempe						
	t Reading (Instrument Reading (mg/L)							
Model or U		/		Model or Unit No.:							
model of other reci-				model of otherwo							



Total Depth to Well: 23,	5(6)
Total Depth to Well:	
Project Name: IMPA 2,666 2006 10 10 10 10 10 10 10	
Project Name: TMPA & 16 bons Creek 1 Casing/Borehole Volumes: Circle one 1 Casing/Borehole Volumes: Circle one	
Date: February 22, 3017 Sampled By: Bd Clincle one A Casing/Borehole Volumes: Clircle one A Casing/Borehole Volumes: Clircle one Clircle one Clircle one Clircle one Total Casing/Borehole Volumes Removed: Volumes Re	
Sampled By: Ed	
Method of Purging: Det State Det	
Method of Purging:	
Method of Sampling: 10 to	
Time	
Low Flow Stabilization Criteria	s d sediment)
14:22 22.89 4.20 13.4 6.22 444 6.6 14:27 V 21.5 22.89 4.21 13.4 6.65 441 6.6	CAOT
14:27 V 2.15 22.89 4.21 73.4 6.65 441 6.6 4.65 4.	
pH CALIBRATION (choose two) Buffer Solution Field Temperature °C	
PH CALIBRATION (choose two) Buffer Solution Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Field Temperature °C Field Temperature °C Field Temperature °C	
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C	
Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Field Temperature °C	
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Altitude / Salinity % Field Temperature °C Field Temperature °C Field Temperature °C Field Temperature °C	
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Field Temperature °C Field Temperature °C Field Temperature °C Model or Unit No.: Model or Unit No.: Altitude / Salinity % Field Temperature °C	
KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Tubing left in Field Temperature °C Field Temperature °C	
Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C	
Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C	
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Tubing left in Field Temperature °C Field Temperature °C	
Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C	
Field Temperature °C Field Temperature °C	
Field Temperature °C Field Temperature °C	well.
	000111
Instrument Reading (mV) Instrument Reading (mg/L)	
Model or Unit No.: Model or Unit No.:	



Well ID:	SFI A	4111-4				Initial De	enth to Wat	or: /4	1.11	wrieeler	
			icate ID:	DUP-	Initial Depth to Water:/4, // / Depth to Water after Sampling:/7,931						
Sample De							pth to Well			,0	
			615006	50		Well Dia	meter:	2 1/			
			bbons Cr				g/Borehole				
		ry 22,				(Circle o					
Sampled E		1					g/Borehole	Volumes: _			
Method of	Purging:	Sub	mersible	,		(Circle o		ala			
		10					sing/Boreh s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, t	Remarks urbidity, and sediment)	
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	14100		
15:35	×40	\$200		22,57	6.32	7.77	\$.25	-27	39.8	Clear; Shight hydrocarbon odor	
15:40				22.59			Ø.Ø	-23	15.4		
15:45				22.60	,		0.0	-16	4.7		
15:50				22.61		7.89	\$.\$	-14	\$.0		
		-	7	1	1	1					
			Damy	ples	10	Ken					
			•		,						
			pH CALIB	RATION (c	hoose two	se two)			Model or	Unit No.:	
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0					
Field Tem	perature °	С									
Instrumen	t Reading										
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC) - CALIBRAT	ION		Model or	Unit No.:	
KCI Solution	on (μS/cm=	=μmhos/cm)		1413 at 25°C	12880 at 25	5°C				
Field Tem											
Instrumen											
		DOX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:		
Standard	Solution (r	mV)		,	Altitude / Sa					2-2 collected	
	nperature °				Field Temperature °C				JU	a collected	
Instrument Reading (mV)					Instrument Reading (mg/L)						
Model or Unit No.:					Model or Unit No.:						



Semple Depth SPL MW-2 Sample Depth Depth Semple Depth Se											wrieeler		
Sample Depth: \$21' Project Name: TMPA Sibbans Creek Date: February 22 2017 Sampled By: 334 Method of Purging: Sub weersible: Circle one) Time Intake Depth Railbans Creek Depth Railbans Creek (Circle one) Total Depth to Well: 23.6/ Well Diameter: 2 V 1 Casing/Borehole Volumes: (Circle one) A Casing/Borehole Volumes: (Circle one) Total Casing/Borehole Volumes: (Circle one	Well ID: _	SFLM	W-2										
Project Name:				licate ID: _			Depth to	Water afte	r Sampling	: 13.	14'		
	Sample D	epth: ゞ	211				Total De	pth to Well	23.6				
Date: Feb ruary 22 2017 Sampled By: But Method of Puriging: Sub metricial Time Intake Depth (ml/min) Cow flow Stabilization Criteria +/-3% +/-0.1 +/-3% +/-10%	Project ar	nd Task No	.: 6706	150060			Well Dia	meter:o	24				
Sampled Sy: Substitute Su	Project Na	ame: TN	IPA Gi	bhons Cr	eek				Volume: _				
Method of Purging:	Date:	Februa	ry 22,	2017									
Total Casing/Borehole Volumes Removed: Total Casing/Borehole Volumes Removed: Total C									Volumes: _				
Time Intake	Method o	f Purging:	Sub	mersible	e								
Time	Method o	f Sampling	j: <u>/o</u> j	wflow									
Low Flow Stabilization Criteria	Time						Electrical Conductance	Oxygen	Reduction Potential		Remarks turbidity, and sediment)		
(6:59	Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
(6:59	16:54	×21'	*200		22.20	6.68	9.35	1.14	147	86.4	Slightly dandy and		
17:04	16:59		-4.	,		1				53.1	Cleaning		
17:09 3 1,5 2 1,68 6.58 9.49 0.42 1/64 7.6	17:04												
pH CALIBRATION (choose two) Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (µS/cm=µmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % 17:55 – Fark-BSA-32 Collected Instrument Reading (mV) Instrument Reading (mg/L)	17:09			21,5									
PH CALIBRATION (choose two) Model or Unit No.: Buffer Solution			-			1	1						
## Proof of the p				amo	es	1a	Ker						
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)													
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)													
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)													
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading Instrument Reading Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)													
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)													
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading Instrument Reading Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)				1									
Buffer Solution pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading Instrument Reading Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)				pH CALIB	RATION (d	choose two)		N N	Model or	Unit No ·		
Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	Buffer So	lution			100	100000000000000000000000000000000000000					omerio		
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No.: Model or Unit No.: Model or Unit No.: 12880 at 25°C Instrument Reading (mV).			2		p. 1 1.0	pi r.o	pir 10.0						
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No.: Model or Unit No.: 12880 at 25°C Instrument Reading (molecate)		1											
KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % 17:55 - EOBK-BJG-Jage Calibration (mV) Field Temperature °C Field Temperature °C Collected Instrument Reading (mV) Instrument Reading (mg/L)	instrumer		ALEIA ELE	0771011 0	CHELLOT					4	1.150.157		
Field Temperature °C Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)										Model or	Unit No.:		
Instrument Reading ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	KCI Soluti	ion (μS/cm=	μmhos/cm)		1413 at 25°C	12880 at 25	5°C					
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes: Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L)	Field Tem	perature °C)										
Standard Solution (mV) Altitude / Salinity % Field Temperature °C Instrument Reading (mV) Altitude / Salinity % Field Temperature °C Collected Instrument Reading (mg/L)	Instrumen	nt Reading											
Field Temperature °C Field Temperature °C Collected Instrument Reading (mV) Instrument Reading (mg/L)		ORP/REI	OOX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:			
Field Temperature °C Field Temperature °C collected Instrument Reading (mV) Instrument Reading (mg/L)	Standard	Solution (r	nV)			Altitude / Sa	alinity %		1	17:55	- EOBK-BJG-2221		
Instrument Reading (mV) Instrument Reading (mg/L)	Field Ter	nperature °	С			Field Tempe	erature °C						
Model or Unit No.: Model or Unit No.:	Instrume	nt Reading	(mV)			Instrument I	Reading (mg/L)	- 4				
	Model or	Unit No.:				Model or Ur	nit No.:	1					



	1 may 800									wheeler		
Well ID:					_	Initial Depth to Water: 15,77						
Sample ID			licate ID:			Depth to	Water after	r Sampling	: 19.	231		
Sample De	epth:&	22'				Total De	pth to Well	: 24	1.3'			
			150060			Well Dia	meter:	2"	:			
			ibbons C	reek		1 Casing/Borehole Volume:						
Date:	February	23,20	017			(Circle one) 4 Casing/Borehole Volumes:						
Sampled B						4 Casing (Circle of		Volumes: _				
Method of	Purging:	Sul	mersible				sing/Boreh	nole				
Method of	Sampling	: Low	flow				s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	riteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
08:47	222	\$175		18,93	4,29	12.1	1.59	351	59.2	Clear; no odor		
08:52	1	1		19.04			1.30		45.1	, , , ,		
08:57				19.18	9.6	12.1	1,00	326	26.1			
09:02	V	V	21.5	19.26		12.1	0.96	320	18.0			
		5	amp	les	Ta	ken						
			pH CALIB	RATION (choose two)		1	lodel or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °(0										
Instrumen	t Reading				17							
		CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC	– CALIBRATI	ION	1	Andel or	Unit No.:		
KCI Solution		μmhos/cm	-		1413 at 25°C		600		noder of	Offic No		
	perature °C	***************************************	/		7							
Instrument	2000000				1							
		OX CALIB	RATION		DISSOI	VED OXYGEN	CALIBRA	TION I	Notes:			
Standard Solution (mV)					Altitude / Sa		AVEIDIVA		ioles.			
Field Temperature °C					Field Tempe							
Instrument Reading (mV)						Reading (mg/L)						
Model or Unit No.:					Model or Unit No.:							



Well ID: $\underline{SFL\ MW-3}$ Initial Depth to Water: $\underline{17.28}^{\circ}$ Sample ID: Depth to Water after Sampling: $\underline{17.73}$ Total Depth to Well: $\underline{28.2}^{\circ}$	
	~1
Sample Depth: $25.5'$ Total Depth to Well: $28.2'$	5
Project and Task No.: 6706/50060 Well Diameter: 2"	
Project Name: TMPA Gibbons Creek 1 Casing/Borehole Volume:	
Date: February 23, 2017 (Circle one)	
Sampled By: 4 Casing/Borehole Volumes:(Circle one)	
Method of Purging: Submersible Total Casing/Borehole	
Method of Sampling: Volumes Removed:	
Time Intake Depth Rate (ml/min) Cum. Vol. (gal.) Temp. (°C) PH (units) Specific Electrical Conductance (mS/cm) Dissolved Oxygen (mg/L) Oxidation-Reduction Potential (mV) NTW	temarks dity, and sediment)
Low Flow Stabilization Criteria +/- 3% +/- 0.1 +/- 3% +/- 10% +/- 10%	
09:51 ×25.5 ×250 21.15 3.46 7.32 Ø.Ø3 358 311 tax	n; no oder
	tan; 1111
10:01 21.47 3.47 7.31 \$ \$ \$ 347 116	1
10:06 21.59 3.46 7.31 Ø.Ø 345 72.6	·
10:11 21.61 3.46 7.30 \$.\$ 344 49.4 4	learing up
10:16 V X 2.5 21.62 3.46 7.30 Ø. Ø 343 32.1	11 11
Damples Taken	
pH CALIBRATION (choose two) Model or Unit	No.:
Buffer Solution pH 4.0 pH 7.0 pH 10.0	
Field Temperature °C	
Instrument Reading	
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION Model or Unit	t No.:
KCl Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C	
Field Temperature °C	
Instrument Reading	
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes:	
Standard Solution (mV) Altitude / Salinity %	BK-BJG-22317
	lected
Instrument Reading (mV) Instrument Reading (mg/L)	
Model or Unit No.: Model or Unit No.:	

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Well ID: _	SFL-	- MW	3			Initial Depth to Water:							
Sample ID	:	Dup	licate ID: _			Depth to Water after Sampling:							
Sample D	epth:	10	1. 5			Total Depth to Well:							
			16 1500			Well Diameter:							
Project Na			GC 1	M.he		1 Casing/Borehole Volume:(Circle one)							
Sampled I	Зу:	SCM	Ć)			4 Casing		Volumes:					
Method of		1	r flow w flo	v Sub	-	Total Ca Volume	asing/Bore	hole d:					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/em)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	on (color, turbidity, and sed				
0415		~a50		3.90	3.69	41	211	469	100	Light			
2720		-250		743	73.66	(97	@1.2	+437	190	Mr dropp			
7425				24,7	37/4	691	0.98	424	69.8	Clearing			
7930				25.00	3,67	6.89	0.85	,	36.1	Eleavina			
0935			2,5	25,10		6,88	0.79	403	30,1	NTV at			
										Lovest point			
		Same		11) - 4-	-						
, ,	7	amp	185	Jako	en C	() 13	50						
,													
			pH CALIB	RATION (choose two				Model or Unit	No.:			
Buffer Soli	ution			pH 4.0	pH 7.0	pH 10.0							
Field Tem	perature °0												
Instrumen	t Reading									1			
	SPE	CIFIC ELEC	CTRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON		Model or Unit	No.:			
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C						
Field Temp	erature °C												
Instrument	Reading												
ORP/REDOX CALIBRATION					DISSOL	CALIBRA	TION	Notes:					
Standard Solution (mV)			Altitude / Sal	inity %									
Field Tem	Field Temperature °C			Field Temperature °C									
Instrumen	Instrument Reading (mV)			Instrument Reading (mg/L)									
Model or U	Model or Unit No.:				Model or Unit No.:								



	-	14:	11							wheeler		
Well ID: _	SFL	MW	T	1000	<u> </u>	Initial Depth to Water: 14, 98						
Sample ID):	Dup	licate ID: _	DUP	-1	Depth to	o Water after	er Sampling	:			
	epth:		-/-15			Total De	epth to Wel	l:				
Project ar	nd Task No	D.: 6/0	06 150	060		Well Dia	ameter:	2"				
Project Na	5-2	MP.T	GC M	1.10		1 Casing/Borehole Volume:(Circle one)						
		SCM				4 Casing/Borehole Volumes:						
Method of	f Purging:	Low	flags	Jul.		(Circle o						
			w flan				asing/Borel s Removed	l:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (ES/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, turk	Remarks sidity, and sediment)		
1018		~25C		2507	6.10	7.55	1.98	38	201	tan henry		
1023				24.94	6.17	7.63	0 93	22	57.3	Sulfhos		
1928				24 96	6.18	767	0.67	23	14,4	Clearing		
1033				24 95	611	769	0.55	26)		
1038			4	24,95	617	7:71	0,50	27	7,3 5.5	clearing		
1				1.75			0,00					
			5	(400)	26 (11-1	-11	0	30			
			10	angle) (HECK	00	10.	58			
) · · · · · · · · · · · · · · · · · · ·						
1	A MILE		pH CALIB	RATION (c	hoose two			N	lodel or Uni	it No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C											
Instrumen	t Reading											
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or Uni	it No.:		
KCI Solutio	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Temp	oerature °C											
Instrument	Reading											
	ORP/RED	OX CALIB	RATION		DISSOLY	/ED OXYGEN	CALIBRAT	ION N	lotes:			
Standard :	Solution (m	ıV)		A	ltitude / Sal	inity %						
Field Tem	perature °0			F	ield Tempe	rature °C						
Instrumen	t Reading ((mV)		li	nstrument R	teading (mg/L)						
Model or l	Jnit No.:		- 1	N	lodel or Uni	t No.:						



Well ID: _	MNU	1-18				Initial Depth to Water: 8.88′						
Sample ID):	Dup	licate ID: _			Depth to Water after Sampling:						
Sample D	epth:	19'				Total De	epth to Wel	: 50.	95'			
			6 1500			Well Diameter:						
Project Na	ame:/	MPA G	ibbans o	Creek	Mine	1 Casing/Borehole Volume:						
Date:	5-2-1	7	2/			(Circle one)						
Sampled I	Ву:	SCM/I	16	1	111	4 Casing/Borehole Volumes:(Circle one)						
Method of	f Purging:	Low	flow	persto	ritic	Total Casing/Borehole						
Method of	f Sampling	: Low	flow	Pe.1:50	altic	Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks idity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	,	10		
1223	491	250		24.79	7.41	4,48	3.09	-129	3.8	Stight Sulhur as Mostly Clear		
1228	1			24,30	7.39	4,46	2,65	-134	7.0	1 310		
1233				23,90	1 0	4.47	a.45	-130				
1238		V	12	23,66		4.48	2,34	-136	0.0			
		V		*		1000		100				
							1					
			A	Sula	06 /	To location	ed Ca) [2:	32			
				-ary		Loneen						
			pH CALIB	RATION (c	hoose two)		N	lodel or Uni	t No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °(2										
	t Reading											
		CIFIC FLE	CTRICAL C	ONDUCTA	NCF (SFC)	- CALIBRATI	ON	N	lodel or Uni	t No.:		
KCI Solutio		μmhos/cm)	T. G. S. C. S. C.		1413 at 25°C			"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	77		
					1410 0120 0	12000 0120						
	perature °C	,										
Instrument		201/04/15	DATION		DIOCOL	VED OVVCEN	CALIBBAT	TION A	1-4	1. 40//		
Chandin	120000	OOX CALIB	KATION		- 100 No. 10 Care	VED OXYGEN	CALIBRA	ION N	iotes:/oc	is 19" ags		
	Solution (n				Altitude / Sa		-					
	nperature °				Field Tempe							
	nt Reading	(mV)				Reading (mg/L)						
Model or	Unit No.:			1	Model or Un	nt No.:	ſ			-		
							1					



										VIII CEICI		
Well ID: _	MNW-1	5				Initial Depth to Water: 4,62'						
			licate ID: _			Depth to	Water after	er Sampling	1: 407	181		
Sample D	epth:2	4.30				Total De	epth to Well	: 26.8	0'			
Project ar	nd Task No	: 67061	50060			Well Diameter: 2"						
Project Na	ame: TM	PA - Gib	bons Cre	ek		1 Casing/Borehole Volume:						
Date:/	Tay 2, 2	017				(Circle one)						
Sampled I	Ву:					4 Casing/Borehole Volumes:(Circle one)						
Method of	f Purging:	low	flow		Total Casing/Borehole							
Method of	f Sampling	: per	istaltic				s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
1736	24.30	200		29.33	3.98	2.70	4.47	372	8.0	Clear; no odor		
1741	1	1		26.92		3,33	3.10	328	Ø. Ø	7.5.500		
1746				26.44			2.80	324	Ø.0			
1751	V	V	22.0				2.66	324	0.0			
-			1	*	1							
	(Da	mple	25	Vah	en						
			1									
		E	pH CALIB	RATION (choose two)		N	lodel or	Unit No.:		
Buffer Sol	ution		/	pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C											
Instrumen												
modulich		CIEIC EL E	CTRICAL C	ONDUCT	ANCE (SEC)	CALIDDATI	ON	N.	Andal or	Unit No.:		
14010 1 11				CNDOCI		- CALIBRATI		IV	iouei or	Offit NO		
	on (μS/cm=	Character State State St			1413 at 25°C	12880 at 25	-0					
	perature °C											
Instrument	Reading											
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	ION N	lotes: 7	Tocis 29" ags		
Standard Solution (mV)					Altitude / Sa	linity %				3		
Field Temperature °C					Field Tempe	erature °C						
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or	Unit No.:				Model or Unit No.:							



Well ID:	SFL-	MWZ				Initial De	epth to Wat	er:	1.10			
0.000			licate ID: _			Depth to Water after Sampling: 12,13						
Sample D	enth:					Total De	pth to Well	:				
Project a	nd Task No	o.: 670	06/50	060		Well Dia	meter:	2"				
Project N		MPA	GC			1 Casing/Borehole Volume:(Circle one)						
Sampled	Ву:	5CM	Ν .			4 Casing (Circle o	g/Borehole one)	Volumes: _				
A		Low Lov	- flows	ond Sv	bi		sing/Boreh Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tur	Remarks bidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		1		
0936		~200		23,86	5.85	9.88	2.49	177	109	Mostlycar		
0941				27.19	5.98	9,94	1.67	158	41.9			
0946				24,54	6.09	9,98	1123	140	16.4			
0951				24.63	6,13	10.0	1.03	133	9.9			
2956				25:01	6.15	10.5	0.89	198	6.1	very clear		
1001				25,11	6.17	10,6	0.81	125	5.6			
1006			3,5	25,13	6.19	10,7	0.76	123	1,9			
			AS	Pary	3	aker (a ,	00	6			
				V								
8-7			pH CALIB	RATION (c	choose two)			Model or Ur	nit No ·		
Buffer So	lution		*	pH 4.0	pH 7.0	pH 10.0	- ×		10401 01 01			
	nperature °	D		prino	Pittio	privote						
Instrume	nt Reading											
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	Model or U	nit No.:		
KCI Soluti	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Tem	perature °C											
Instrumer	t Reading											
ORP/REDOX CALIBRATION					DISSOLVED OXYGEN CALIBRATION			ION N	lotes:			
Standard Solution (mV)					Altitude / Sa	linity %						
Field Ter	Field Temperature °C				Field Temperature °C							
Instrume	nt Reading	(mV)			Instrument Reading (mg/L)							
Model or	Unit No.:			1	Model or Un	it No.:						



Well ID:	SFL	- MW	5			Initial D	epth to Wat	er.	159	Wheeler			
7.51			licate ID: _			Depth to Water after Sampling:							
Sample D	enth:					Total De	enth to Well	:					
Project a	nd Task No	o.: 670	16 150	1060	-	Well Dia	meter:	2"					
Project N		AAMI	GC M			1 Casing/Borehole Volume:(Circle one)							
7	By: <u></u>		DI				g/Borehole	Volumes:					
		Low : Low	1	Sub.		Total Ca	asing/Borel s Removed						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks bidity, and sediment)			
1045		-200		24.96	4.67	11.5	2,64	323	19.8	Mostly clear			
1050			0-1	25,24	4.58	11.6	1.34		6.7				
1055				25.36	4,56	116	1.12	328	4.0				
1100				25,53	4.53	1116	0.93	330	8.1	Very clear			
1105				25.57	4.51	11.6	0.86	330	1,5				
1110			3	25,41	4,49	11,6	0.78	336	1.0				
							4						
				1	Ta	miles	take	1)					
						(a)	110						
T-201-20													
D " 0 I			PH CALIB	RATION (c				V	Model or Un	it No.:			
Buffer Sol				pH 4.0	pH 7.0	pH 10.0							
	perature °C	;			-								
Instrumen	nt Reading		1000				Secretary Dres						
1.5			CTRICAL CO			- CALIBRATI		N	Model or Un	nit No.:			
	**	μmhos/cm)		1	1413 at 25°C	12880 at 25°	°C						
	perature °C												
Instrument	t Reading												
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRAT	ION N	lotes:				
	Standard Solution (mV)				ltitude / Sal	inity %							
	Field Temperature °C			F	ield Tempe	rature °C							
	t Reading (mV)	7		Instrument Reading (mg/L)								
Model or	Model or Unit No.:				Model or Unit No.:								



Well ID: _	551	/AP	MW.			Initial D	epth to Wa	ter: <i>E</i>	5.46	wieeier			
	,	/	licate ID: _			1-110							
Sample D	epth:					Total Depth to Well:							
Project an	d Task No	o.: 670	26150	060		Well Diameter:							
	ame:	.0		i		1 Casing/Borehole Volume:(Circle one)							
	5-3-1					4 Casing/Borehole Volumes:							
Sampled I			fi .	^ I		(Circle		volumes: _					
		Low	1.1				asing/Bore						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential	(color, turb	Remarks idity, and sediment)			
1745		-250		2/12	E 041	029	100	(mV)	NIU	Light brown			
1350		av		2603		8,5/	1,80	-13	964	moderate Sutter			
1355				26,41	5.85	841	0.11	0	583	1 -/1			
1400				27.16		011	0.76	2	435	Clearing Sl.			
1405				28,21	5.85	0,72	016)	2	335				
1410				20 95	5.84	8.42	0,61	7	264				
1415				28.95	100	8,53	0.66	15	145	TO COMPANY OF THE PARTY OF THE			
1420		_	-3.5	28.3	-0	8,59	061	13	94.0	+ Lanesy			
1 7000			2,2	٥, ٦	, ,,,,	0197	0.61	13	1100	NTU			
			1		9	1.0							
		-	TAW	Mes		Kenl	2	147	0				
			00	AICC	, ,			10					
			pH CALIB	RATION (choose two)			N	lodel or Uni	t No.:			
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0							
Field Temp	perature °C	,											
Instrument	t Reading												
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	I.	lodel or Uni	t No.:			
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C						
Field Temp	erature °C									4			
Instrument	Reading												
ORP/REDOX CALIBRATION					DISSOLV	CALIBRAT	TON N	lotes	5/1				
Standard Solution (mV)				Altitude / Sal	inity %		1	adium	Samples				
Field Temperature °C				Field Temperature °C				Taker	1				
Instrument Reading (mV)					Instrument Reading (mg/L)								
Model or L	Jnit No.:				Model or Uni	t No.:							



Well ID: _	SFL M	1W-6				Initial Depth to Water:						
Sample ID	:	Dupl	icate ID:					er Sampling		67'		
Sample De	epth:	21'				Total De	pth to Well	: 23.1	1			
Project an	d Task No	6706					meter:					
Project Na	ame: TA	APA- GI	bbons Cri	eek				Volume:				
Date:/	May 3,	2017				(Circle o						
Sampled B						4 Casing (Circle of	g/Borehole	Volumes: _				
Method of	Purging:	1000	flow					nole				
		: per		pump		Total Casing/Borehole Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tu	Remarks rbidity, and sediment)		
Low	Flow Stab	ilization Cri	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%				
14:07	21'	×150		26.93	3,97	13.1	4.36	444	Ø.Ø	Clear; no odor		
14:12	1	1		26.89		13.2	3.78	462	0.0	Clear, no odor		
14:17				27.00		13.2	3,43		0.0			
14:22	V	Y	\$2.0	27.14		13.2	3.28	460	Ø.Ø			
		-	1		1				-			
			- IL CALIB	DATION /								
Buffer Sol	ution		ph CALIB		choose two		T		Model or U	nit No.:		
	perature °(2		pH 4.0	pH 7.0	pH 10.0						
	· S VIII	<u> </u>										
Instrumen	nt Reading				17/25 (1.25	- 100 At 100 and 100						
	-			ONDUCTA) – CALIBRAT		1	Model or L	Init No.:		
		μmhos/cm)	6		1413 at 25°C	12880 at 25	5°C					
	perature °C	0										
Instrumen	t Reading											
ORP/REDOX CALIBRATION					DISSOL	VED OXYGEN	CALIBRA	TION	Notes:			
Standard Solution (mV)					Altitude / Sa	alinity %						
Field Temperature °C					Field Tempe	erature °C						
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or	Unit No.:				Model or Unit No.:							



	e/ h	A\ (_	11111		0.00000	CONTRACTO			wheeler			
			-2			Initial Depth to Water:							
		1117	licate ID:		-								
Sample D	epth:	12	2615	00 [0		Total Depth to Well:							
			6			(Circle one)							
Sampled I			A			4 Casin		Volumes	:				
Method of	Purging:	Lan	1 How	v Sib	,		asing/Boreh	nole					
Method of	Sampling	: Lan	fla	~ JA	6.								
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potentian (mV)	n (color tur	Remarks bidity, and sediment)			
1520		~200		26,68	4.86	9,56	109	136	685	moderate Sulfa			
1525				2601	4.88	9,55	0.75	127	451	Slight tan			
1530				26.40	4.89	9.53	0.55	122	268	clearing			
1535	1			26,27	7 4.91	9,53	0.50	119	146	lodor still pres			
1540				2684	4,94	9,51	0,45	8311	3 89,3	mostly clear			
1545				27.4	4,96	9,49	0.45	111	70,3	+ Lowest			
										NTU			
		/	7-1	-		1	0	IL	115				
		1 /	ample) (allec	100	Co	10	10				
			A.										
100		-	700	CP	Mor	5							
			, .		1 de								
			pH CALIBI	RATION (choose two				Model or Ur	nit No.:			
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0							
Field Temp	oerature °C	,											
Instrument	Reading								•	`			
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON		Model or Ur	nit No.:			
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C						
Field Temp	erature °C												
Instrument	Reading												
	ORP/RED	OX CALIBR	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION	Notes:	Ran aut at			
Standard S	Solution (m	V)		,	Altitude / Sal				(Liter)	Cranked up			
Field Temperature °C					Field Tempe				PLIMP +	lovered it			
Instrument Reading (mV)					Instrument Reading (mg/L)				Fuse bu	sted on central			
Model or U	Jnit No.:				Model or Uni	t No.:			0 1	est America			

Samples taken



Well ID: _	APM	W-3				Initial D	epth to Wat	er:	38'	
			licate ID:				Water after			
	epth:						epth to Well			
			150060			Well Dia	ımeter:&	4		
Project N	ame: T	MPA-G	cibbons C	reek			g/Borehole	Volume: _		
Date:	May ?	3,2017				(Circle o				
	Ву:1		1			(Circle o	g/Borehole one)	Volumes: _		
Method o	f Purging:	low	flow				asing/Borel	nole		
Method o	f Sampling	g: per	istaltic	pump		Volume	s Removed	:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tur	Remarks bidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
1601	41'	2200		26.13	5.01	1.74	4.10	218	0.0	Clear; no odor
1606				25.80		1.72	3.90	231	13.3	
1611				25.63		1.69	3.74		Ø.ø	
	1616 4 4 32				5.02	1.70	3.62		0.0	
			-							
			Pamp	les	Vat	en —				
			pH CALIB	RATION (choose two)		N	lodel or Ur	nit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	nperature °(С								
Instrumer	nt Reading									
	SPE	CIFIC ELE	CTRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON	N	Model or Ur	nit No.:
KCI Soluti	on (μS/cm=	-μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Tem	perature °C									
Instrumen	t Reading									\
	ORP/RED	OOX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRATION		lotes:	
Standard Solution (mV)					Altitude / Sa	linity %			Split r	adium Samples
Field Temperature °C					Field Temperature °C Split radium				ollected.	
Instrument Reading (mV)					Instrument Reading (mg/L)					
Model or Unit No.:				Model or Unit No.:						



	10 111	.1 .18				1-111-1 D		12	3/1	MICCICI
	AP MO					Initial De	epth to Wat	er:	160	ии /
Sample ID):	Dup	licate ID: _			Depth to	Water after	r Sampling	173	77
	epth: ሗ식		A second second				epth to Well			
		.: 67061		i						
			bons Cree			1 Casing (Circle of	g/Borehole one)	Volume:		-
	May 4,						g/Borehole	Volumes:		
	Ву:		01			(Circle d		_		
		low			-		sing/Boreh			
Method o	f Sampling	: Subv	nersible			volume	s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
08:47	340.5	\$ 200		21.86	5.95	1.83	3,39	151	33.3	Clear ; no oder
08:52	1			22.14		1.84	3.23	143	13:0	
08:57					5.94	1.85	3.11	143	9.0	
					-1					
		Dam	ples	7	aken					
					N					
			pH CALIB	RATION (choose two)		N	lodel or	Unit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	nperature °C									()
Instrumer	nt Reading									
	SPE	CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC)	- CALIBRATI	ON	V	lodel or	Unit No.:
KCI Soluti	on (μS/cm=	μmhos/cm))		1413 at 25°C	12880 at 25	°C			
Field Tem	perature °C									
Instrumen	t Reading									
	ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	ION N	lotes:	
Standard Solution (mV)				Altitude /		linity %			Purged	for 10 min. prior
Field Temperature °C					Field Temperature °C to taking reas				ing readings.	
Instrument Reading (mV)					Instrument F	Reading (mg/L)			, , , , ,	1
Model or Unit No.:					Model or Unit No.: Duplicate/split radium					
									Sample	es collected



	258	-	1						3 9 0	wheeler
		Mw -l					epth to Wat			- 11
Sample ID	:	Dup	licate ID: _				Water afte		: 41.8	27
Sample De		1-	26			Total De	epth to Well	:		
		o.: 670				Well Dia	meter:	2"		
	,	MPA	GC 1	Mne			g/Borehole	Volume: _		
Date:						(Circle o		Volumosi		
Sampled I			Ai	11		(Circle	g/Borehole one)	volumes: _		
		Low	D	Subi			asing/Boreh			
Method of	Sampling	: Low	flow 5	b		Volume	s Removed	:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks idity, and sediment)
0930		~200		2239	6.11	537	1.48	18	43.9	No odor
0935				22.14	6.17	5,37	1.08	13	18.1	Mostly clear
0340				23,29	6,17	5,37	0.83	10	7.3	
0945				23,33	6,17	5.36	0.72	8	3.5	Very clear
0950				23,18	6,20	5,35	0.65	6	1.5	
0955			25	23,05	6:26	5,35	0.64	5	0,2	
		09	ample	25	ker	(a)	195	5		
			pH CALIB	RATION (c	choose two			N	lodel or Uni	No.:
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0				
Field Temp	oerature °C)								1
Instrument	Reading									
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	V	lodel or Uni	it No.:
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Temp	erature °C			- 1						800
Instrument	Reading								٨	
	ORP/RED	OX CALIBR	RATION		DISSOLY	/ED OXYGEN	CALIBRAT	ION N	lotes: 5	Lit Poli
Standard S	Solution (m	V)		F	Altitude / Sal	inity %			Sanolo	- Laken
Field Tem	perature °C)			Field Tempe			0	Tost A	merical
Instrument	Reading (mV)		1	nstrument R	eading (mg/L)			1-0 1/	mericay
Model or U	Jnit No.:				Model or Uni					
Document1										



	^~								001	WICCIC
Well ID: _	AP	MW-5				Initial De	epth to Wat	er:	29'	
			licate ID: _	DUP-	3	Depth to	Water afte	r Sampling	: <i>L</i>	1.94'
Sample D	epth:&	40.5					pth to Well			
			150060			Well Dia	meter:	2"		
Project Na	ame: TM	IPA-Gil	bons Cre	ek			g/Borehole	Volume: _		
Date:	May 4, 2	1017				(Circle o		Valumaa		
Sampled	By:	1	Λ.			(Circle o	g/Borehole one)	volumes: _		
Method o	f Purging:	low	How			Total Ca	sing/Boreh	ole		
Method o	f Sampling	: _ subv	nersible			Volume	s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		
10:41	#40.5	\$150		22.40	3.64	5.56	3.39	302	356	chalky; nooder
10:46	1	1		22.50			3.12	328	155	7,100
10:51				22.77		1	3.00	340	78.8	clearing up
10:56				22.74	_		2.90	351	32.4	3
11:01	1	V	21.5	22:86		5.67	2.83	356	9.6	
-				1	1	1				
)	eny	les	/	ake	1			
			pH CALIB	RATION (choose two)		N	Model or	Unit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	nperature °C									
Instrumer	nt Reading									
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON	N	Aodel o	Unit No.:
KCI Soluti	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Tem	perature °C	;								
Instrumen	t Reading									
	ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	A CONTRACT OF THE PARTY OF THE	Notes:	
Standard Solution (mV)					Altitude / Sa	llinity %			Duplic	ate samples collected driven samples collected
Field Temperature °C					Field Tempe	erature °C				
Instrumer	nt Reading	(mV)			Instrument F	Reading (mg/L)		S	plat ra	dium samples collected
Model or	Model or Unit No.:				Model or Unit No.: Good recharge					



										wheeler
Well ID: _	55	- MI	W-3			Initial De	epth to Wat	er:	27,	24
Sample ID	:	Dup	licate ID: _	DUP-	2		Water afte			29,47
Sample De	epth:					Total De	pth to Well	880		
Project an	d Task No	.: 670	26150	060		Well Dia	meter:	3	-/	
Project Na	me:	MPA	GC N	line			g/Borehole			
Sampled I							g/Borehole	Volumes:		
Sampled i	Durging		flow	C. h	_	(Circle o				
		: Law			6		sing/Boreh s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µ8/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color tu	Remarks rbidity, and sediment)
1100		200		23,71	4,45	8,38	1.61	288	256	190/ Claudy
1105				250	7 4.32	241	0.22	299	528	No adar
1110				24,30	1 4,32	8.39	0.66	299	184	
1115				24,45	4,32	2.35	0.57	300	75,8	clearing
1120				24,47	4,33	8,33	0,50	309	35,4	
1125			2.5	24,7	4,34	8,32	0.45	300	21,4	mostly clear
1										
							1			
_					-	Sand	5	aken		
					V	101 P	,	7 (-)		
						(A)	110	E		
						(00	110	2		
			pH CALIB	RATION (choose two))			Model or U	nit No.:
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	oerature °C									
Instrument	Reading									
	SPE	CIFIC ELEC	CTRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON		Model or U	Init No.:
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Temp	erature °C									- 13
Instrument	Reading								-10	
	ORP/RED	OX CALIB	RATION		DISSOL	ED OXYGEN	CALIBRAT	ION	Notes	1.4 Radian
Standard S	Solution (m	V)		1	Altitude / Sal	inity %			Samola	1 taken
Field Tem	perature °C)		F	ield Tempe	rature °C			Cer	AMERT (A)
Instrumen	t Reading (mV)		1	nstrument R	eading (mg/L)			(1, -4-5)
Model or U	Jnit No.:			1	Model or Uni	t No.:				
D1					7					

A EQBK/SCM/050417 Taken@1255



										Wileelei
Well ID: _	AP MI	N-4				Initial De	epth to Wat	er: _/3.	25'	
Sample ID):	Dup	licate ID: _			Depth to	Water after	r Sampling	: <u>14.</u>	,19'
Sample D	epth:	50.0					epth to Well		3'	
Project an	nd Task No	: 6706	150060			Well Dia	ameter:	2 "		
Project Na	ame:	1PA-Gi	bbons Cr	reck			g/Borehole	Volume: _		
Date:/	May 4,	2017				(Circle o		Valuman		
Sampled I	By: By		1			(Circle o	g/Borehole one)	volumes:		
Method of	f Purging:	low	flow			Total Ca	asing/Boreh	ole		
Method of	f Sampling	: subm	ersible pu	anp		Volume	s Removed	:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stabi	lization Cr	riteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	1
1236	\$50.0	2150		23.46	5.71	5.02	3.92	52	37,9	Clear; sulfur odor
1241		1		23,30	5.70	4.99	3.83	65	36.2	
1246				23.59		4.99	3.39	68	20.2	
1251				23.79		4.96	2.73	86	3.1	
1256	V	V	21.5	23:75		4.97	2.68	92	Ø.0	
				1	T	- 1			/	
			Dav	mple:	5/	aken				
				1						
1354	- EC	RBK	-BJG	1-50	9417	taken				
			pH CALIB	RATION (choose two	0)		N	lodel or	Unit No.:
Buffer Sol	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C)								
Instrumen	nt Reading									
		CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC) – CALIBRATI	ON	N	Model or	Unit No.:
KCI Solutio	on (μS/cm=				1413 at 25°0					
	perature °C									
Instrument										
	ORP/RED	OX CALIB	RATION		DISSOL	VED OXYGEN	CALIBRAT	ION I	lotes:	
Standard	Solution (m	nV)			Altitude / Sa	alinity %		4	Split r	adium samples
Field Tem	nperature °(0			Field Temp	erature °C			colle	ected
Instrumer	nt Reading ((mV)			Instrument	Reading (mg/L)			- 11	
Model or	Unit No.:				Model or U	nit No.:		/	354-E	quip-blank taken



									1 1	wheeler
Well ID: _	SFL	MW-	7				epth to Wat		2.00	
			licate ID:			Depth to	Water after	r Sampling	: _/4	.79'
Sample D	epth:	55.5				Total De	pth to Well	: 58.1	1	
			150060			Well Dia	meter:	2"		
			ibbons C			1 Casing (Circle of		Volume: _		
							g/Borehole	Volumes:		
Sampled	By:R	M.	Λ.			(Circle o		volunies.		
			flow				sing/Boreh			
Method o	f Sampling	:	omersible	2		Volume	s Removed	-		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, t	Remarks urbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	
1142	\$55.5	₩150		24.40	6.56	8.04	3.29	-35	55.4	clear ; no oder
1147	1	1		24.83	6.55	8.28	2.79	-41	79.0	
1152				24.96	6.43	8.97	2.58	-24	108	
1157				24.75	6.39	9.35	2.51	-9	66.3	·
1202	V	V	¥1.5	24.61	6.37	9.46	2.44	-5	36.1	
				1	1	1				
		(Dan	ple.	5 /	aken				
				/ -				-		
E . No.										
			pH CALIB	RATION (choose two)			Model or	Unit No.:
Buffer So	olution			pH 4.0	pH 7.0	pH 10.0				
Field Ten	nperature °(0								
Instrume	nt Reading									
*4	SPE	CIFIC ELE	CTRICAL C	ONDUCT	ANCE (SEC)	- CALIBRAT	ION	1	Model or	Unit No.:
	ion (μS/cm=				1413 at 25°C					
Field Tem	nperature °C									
Instrumer	nt Reading									
	ORP/RED	OX CALIE	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:	*
Standard	Solution (n	nV)			Altitude / Sa	alinity %				
	mperature °				Field Tempe					
	nt Reading				Instrument I	Reading (mg/L))			
	Unit No.:				Model or Ur					



										AALIGETEI
Well ID: _	MNW.	-18				Initial De	epth to Wat	er: 9.4	0'	
			licate ID: _			Depth to	Water after	er Sampling	: 12:	89'
Sample D	epth:X	48.5'				Total De	epth to Well	: 50.9	5'	
Project ar	nd Task No	.: 6706	150060)		Well Dia	meter:	4"		
Project N	ame: TA	1PA-G	ibbons Ci	reek				Volume: _		
Date:	May 30,	2017				(Circle o				
Sampled	Ву:	84				4 Casing (Circle o		Volumes: _		
Method o	f Purging:	Subi	mersible				asing/Borel	nole		
Method o	f Sampling	: low	flow				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	1
1612	₩48.5	1200		24.36	7.15	4.56	4.83	-120	Ø.0	clear in oder
1617		1		24.64		4.55	3.52	-126	2.9	11 11
1622				24.70		4.57	3.09	-125	6.9	slight gray that
1627	V	V	21.5	25.12	7.16	4.54	3.02	-/23	6.6	11
		-/	~	1 .	1	1				
			Dame	ses	la	ken				,
			1							
			pH CALIB	RATION (choose two)		V	Model or	Unit No.:
Buffer So	lution			pH 4.0	pH 7.0	pH 10.0				
Field Ten	nperature °(2								
Instrumer	nt Reading									
		CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC) – CALIBRATI	ION	1	Aodel or	Unit No.:
KCI Soluti		μmhos/cm)			1413 at 25°C				10 200 2	7,,
	perature °C					2 2000				
Instrumen		,								
mstrumen	Total 19 (19)	OOV CALIB	DATION		DISCOL	VED OVVCEN	CALIDDAT	TION I	latası	
Standard	Solution (n	OOX CALIB	KATION		Altitude / Sa	VED OXYGEN	CALIBRA	ION I	Notes:	
	nperature °				Field Temp					
	nt Reading Unit No.:	(1117)				Reading (mg/L)				
Model or	OTHE NO.:				Model or Ur	III NO.;		-		



									,	WITE	eeler
Well ID:	SFLM	W-7		A Vigary is			epth to Wat				
			licate ID: 👤	JUP-1			Water afte			27'	
Sample D	epth:3	£ 55.5°				Total De	pth to Well	58.11	ı		
	nd Task No					Well Dia	meter: _) ((
			bons Cree	k			g/Borehole	Volume: _			
Date:	May 31, 2	017				(Circle o		Valumas			
	By:					(Circle o	g/Borehole one)	voiumes			
	f Purging:						sing/Boreh				
Method o	f Sampling	: low	flow			Volumes	s Removed	:			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, to	Remar urbidity, a	ks nd sediment)
Low	Flow Stabi	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU		
1105	☆55.5′	₹150		25,66	6.72	6.99	3.56	-56	30.8	Clearin	ooder
1110	i	ĺ		26.15	6.65	7.06	2.67	-52	14.6		
1115				26.53		8.27	2.45	-29	6.3		
1120				26.18		8,95	2.32	-17	3.3		
1125	V	V	×2.0	25:98		9,10	2.24	-12	2.2	1	V
		Dam	ples	To	iken						
		Darve	piss	70							
			pH CALIB	RATION (choose two)		1	Model or I	Unit No.:	
Buffer Sc	olution			pH 4.0	pH 7.0	pH 10.0					
Field Ter	mperature °0	2									
Instrume	nt Reading										
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ION		Model or	Unit No.:	
KCI Solut	ion (μS/cm=	-μmhos/cm)		1413 at 25°C	12880 at 25	5°C				
Field Ten	nperature °C)									
Instrume	nt Reading		-								
	ORP/RED	OOX CALIE	BRATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:		
Standard	d Solution (n	nV)			Altitude / Sa	alinity %			Good	rechar	96
-	mperature °				Field Tempe	erature °C					
Instrume	ent Reading	(mV)			Instrument F	Reading (mg/L))		DUP-	1 colle	ected
Model or	r Unit No.:				Model or Ur	nit No.:					



Well ID:	MNW	-15				Initial De	epth to Wat	er: 4.8	5'	
Sample I	D:	Dup	licate ID:			Depth to	Water afte	r Sampling	: 51	0'
Sample I	Depth:	24'				Total De	pth to Well	: 26.80)'	
Project a	nd Task No	67061	50060			Well Dia	meter: _a	74		
Project N	lame: TM	PA-Gibbo	ns Creek				g/Borehole	Volume: _		
Date:	May 31,5	2017				(Circle o		24.27		
	Ву:В					4 Casing (Circle o	g/Borehole one)	Volumes: _		
Method	of Purging:	Subme	ersible				sing/Boreh	ole		
	of Sampling		Λ.				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
Lov	v Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	
1231	≈24'	2200		26.48	3.66	3.53	4.85	326	1177	Yellow; no odor
1236	1	1		26.86		3.69	2.89	320	144	1
1241				27.20		3.80	2.42	325		Clearing
1246				27.18		3.84	2.22	328	37.1	
1251	V	V	12.0	26.96		3.86	2.12	327	22.9	
			1		-					*
		5	emple	5 /	ake	n —				
			7							
1515	- EQB	K-BJA-	053117	calle	ted					
1010		, , ,		Conce						
			pH CALIB	RATION (choose two)		N	Model or	Unit No.:
Buffer S	olution	~		pH 4.0	pH 7.0	pH 10.0				
Field Te	mperature °	C								
	ent Reading									
Illottuille		COURTS ELE	CTDICAL C	ONDUCT	NCE (SEC	CALIDDAT	ION	,	Madalar	Linit No.
			200000000000000000000000000000000000000	CNDOCIA) – CALIBRAT			viouei of	Unit No.:
	tion (μS/cm=)	1	1413 at 25°C	12880 at 25) YC			
Field Ter	mperature °(0								
Instrume	nt Reading									
	ORP/REI	DOX CALIE	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:	
Standar	d Solution (r	mV)			Altitude / Sa	alinity %			Good	recharge
Field Te	mperature °	C			Field Temp	erature °C				3
Instrum	ent Reading	(mV)			Instrument	Reading (mg/L))			
Model o	r Unit No.:				Model or U	nit No.:				

amec foster wheeler

Well ID: _	2	P/AP	10/W-			Initial D	epth to Wat	er:	97	90
	P	Dup				Depth to	Water after	er Sampling):	14.16
Sample D	epth:	1-								
		o.: 670			= 1	Well Dia	meter:	2		
	ame: //	1PAG	C Mil	ne CC	-R	1 Casing (Circle o		Volume:		
Sampled	Ву: 🥩	IM	^/			4 Casing (Circle o	g/Borehole one)	Volumes: _		
		Low t	-1'1				asing/Borel s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, to	Remarks urbidity, and sediment)
1420		~150		25,77	7573	8,55	1,70	49	219	Librat tan
1425				28.16	5,75	8,45	0.00	32	290	. 5011
M30				27.89	5.76	8.33	0.00	29	307	Jishtly dear
1435				28.19	515	8.47	0.00	28	312	
1440				25,31	15.73	8.64	0.00	30	232	lawer NTV
1445				25,7	4573	8,64	000	30	182	Cloudy -white
1450		~	2,5	26/1	5,73	8-67	0,00	30	167	Serving Williams
				0.00					107	A STATE OF THE STA
		7	amp	ed	a	145	0			
_										
2017			pH CALIB	RATION (choose two			IV	lodel or L	Jnit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C	2								1
Instrumen	t Reading									
5	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON	N	lodel or U	Jnit No.:
KCI Solutio	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Tem	perature °C									
Instrument	Reading									
	ORP/RED	OX CALIBI	RATION		DISSOL	/ED OXYGEN	CALIBRAT	ION N	lotes:	VIV
Standard	Solution (m	nV)			Altitude / Sal	inity %		6	Slow I	1 dropping
Field Tem	perature °C	0			Field Tempe	rature °C		A	MU, LO	Purginar
Instrumen	t Reading ((mV)			Instrument R	teading (mg/L)		0	rank	t flow
Model or	Unit No.:				Model or Uni	it No.:			rate of	ance then
Document1								/	E IVEN (Ta un

Meles and Will



Well ID: _	A	10157	APM	W-4		Initial De	epth to Wat	er:	12	.78 IJ -
Sample ID):	Dup	licate ID: _					r Sampling		174/
Sample D	epth:					Total De	pth to Well	:		
Project ar	nd Task No	670	61500	060		Well Dia	meter:	2"		
Project Na	ame: 1/	MPA C	SC Mil	ecc	R		g/Borehole			
	By: <u>5</u>		<u> </u>			•	g/Borehole	Volumes: _		
		LOW	Flow S	ub			asing/Boreh	ole		
		: 1 au		Suf			s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
650	V	250		22,05	5,60	4.81	0.00	65	132	moderate HE add
1655				22,8	5.51	4.82	0.00	74	58.7	The court
17M				22,80	5 49	4.85	0.00	77	15.1	much cleaver
1705				22,70	5.48	48/	0.00	78	RA	Nearly Costal Cle
1710		v	2.5	22,82	5.48	4 27	0.00	78	7	Cao very tout
(24)				~ alcer	2,10	Iral	OL (O O	100	5.3	
1									2,)	
		V	Cons	noled	6	0				
		V	/01	1111		210				
						110				
					9.4	,,,				
			pH CALIB	RATION (c	hoose two)		N	lodel or	Unit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C									
Instrumen	t Reading									
		CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or	Unit No.:
KCI Solutio		μmhos/cm)			1413 at 25°C					
	perature °C									
Instrument										
mod unien		OX CALIBI	PATION		DISSOL	VED OXYGEN	CALIBRAT	ION N	Intes:	Boards around
Standard	Solution (m		ATION	_						
					1, 11					
C 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					Instrument Pending (mg/L)					1 1
					Model or Uni	200 - 0. 10 - 10 - 10 - 10			Tro	nails sticking
Document1								0	ut a	AND COME



Well ID: APMW-3 Initial Depth to Water:												
Sample ID	:	Dupl	icate ID:									
Sample D	epth:~	41'										
Project an	d Task No	.: 6706	150060	1		Well Dia	meter:	2"				
Project Na	ame: TM	PA - Gibl	ons Creek	ς				Volume:				
Date:	June 12	,2017				(Circle o		Valumaa				
						(Official offic)						
Method of	f Purging:	1000	flow			Total Casing/Borehole						
Method of	f Sampling	: per	istaltic			Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	(°C) (units) Conductance (mS/cm) Oxygen (mg/L) Re				Remarks (color, turbidity, and sediment			
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTW			
1748	×41	±150		25.88	5.08	1.84	3.61	195	0.0	clear; no odor		
1753	i	1		25.92	5,10	1.83	2.93	192	Ø.0			
1758				25.98	5.11	1.82	2.68	189	Ø.0			
1803				25.84	5.11	1.81	2.56	189	9.0			
1808	1808 V V 1.5				5.12	1.80	2.52	188	0.0	V		
					ampl	es 70	rken-					
Buffer So	lution		pH CALIB	RATION (c	pH 7.0			N	Model or	Unit No.:		
Field Ten	nperature °	С										
Instrumer	nt Reading											
	SPE	CIFIC ELE	CTRICAL C	ONDUCTA	NCE (SEC) - CALIBRAT	ION	1	Model or	Unit No.:		
KCI Soluti	ion (μS/cm=	=μmhos/cm)		1413 at 25°0	12880 at 25	5°C					
Field Tem	perature °(0										
Instrumer	nt Reading											
	ORP/REI	DOX CALIE	RATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:			
Standard Solution (mV)					Altitude / Sa	alinity %						
Field Temperature °C					Field Temperature °C							
Instrume	Instrument Reading (mV)					Instrument Reading (mg/L)						
Model or	Unit No.:				Model or U	nit No.:						



	AN									Wileelei		
Well ID:	AP 1	MW-5			4	Initial Depth to Water:						
Sample ID:	1	Dup	licate ID: _			Depth to Water after Sampling: 11,35						
Sample Dep	oth:		2/10	-0		Total De	epth to Well	:				
Project and	Task No	61	06150	1000		Well Dia	ameter:	d				
Project Nam	ne: ///	AGC	MINE			1 Casing/Borehole Volume:(Circle one)						
Sampled By				A 1		4 Casing/Borehole Volumes:(Circle one)						
Method of F			and I	Tow 5	ab							
Method of S		(1	low 5	ato	Total Casing/Borehole Volumes Removed:						
Timo	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidatio Reduction Potentia (mV)	on (color, t	Remarks urbidity, and sediment)		
1800		~200		23,57	3.39	5.67	0,00	334		very light HCg		
1805				23,41	3.37	5.76	0,00	336	78.5	very high rica		
1810				2324	3,36	5.78	0,00	336	1	Odar tading		
1815		8	~.3	28,9		5,79	0.90	333		Nearly crysta		
1820								30)		odor nearly as		
									1	The state of the s		
			6	A) a		IOIE				150		
			1	imple	0	1417						
				٧								
			1	1		,				-		
1858		EQB	450	n/00	61217	taken						
				1								
			pH CALIB	RATION (choose two				Model or U	Init No.:		
Buffer Soluti	ion			pH 4.0	pH 7.0	pH 10.0						
Field Tempe	erature °C	;										
Instrument F	Reading											
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON		Model or U	Jnit No.:		
KCI Solution	(μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Tempe	rature °C	7										
Instrument R	Reading									- N		
C	RP/RED	OX CALIBI	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION	Notes:	TU		
Standard Solution (mV) Altitude						Altitude / Salinity % Lowest point = 15.						
Field Temperature °C Field Te						eld Temperature °C						
Instrument Reading (mV) Instrume						strument Reading (mg/L)						
Model or Un	nit No.:				Model or Uni	t No.:		1	horiba	not working		
Document1												



Well ID: _						Initial Depth to Water:						
			licate ID:				Water after					
		22'					pth to Well					
			150060	,		Well Dia	meter:	2"				
	4		bons Cree			1 Casing (Circle of	g/Borehole	Volume: _				
						4 Casing/Borehole Volumes:						
Sampled I	Ву:	1	01			(Circle o	one)	voidines.				
			flow			Total Casing/Borehole Volumes Removed:						
Method of	Sampling	j: <u>per</u>	istaltic									
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
0948	22'	4150		25.31	3.96	13.5	3.40	440	A STATE OF THE PARTY OF THE PAR	Too clear; no odor		
0953	1	1		25,40	3,97	13.6	3,07	446	-			
6958				25.56	3.98	13.5	2.78	438	1.1			
1003	V	V		25.57	3.99	13.5	2.70	434	1.2	V		
_		_<		/	1							
		_	ampl	es	Tak	en						
			1									
		- H	pH CALIBI		hoose two				Model or	Unit No.:		
Buffer Soli	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	0										
Instrument	t Reading											
	SPE	CIFIC ELEC	CTRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATIO	ON		Model or	Unit No.:		
KCI Solutio	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25°	C					
Field Temp	erature °C											
Instrument												
	ORP/RED	OX CALIBI	RATION	- T 1 9	DISSOL	VED OXYGEN	CALIBRAT	ION	Notes:			
Standard S				F	Altitude / Sa							
Field Temperature °C Fi					Field Temperature °C							
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or U					Model or Unit No.:							
Dogument 1												



Well ID: _	MNW	18				Initial Depth to Water:						
			licate ID: _				o Water afte			2 13,72		
Sample D	epth:					Total De	epth to Wel	l:				
Project an	d Task No	6701	61500	0		Well Dia	ameter: H	"				
Project Na	ame: 1/	MA G	C M	ne CC	IR_	1 Casin	g/Borehole	Volume:				
Date:	6-13	-17				(Circle one) 4 Casing/Borehole Volumes:						
Sampled I	By: <u></u>	· M	<u> </u>			4 Casin (Circle		Volumes	:			
Method of	f Purging:	Law	flow s	sub			asing/Borel	nole		,		
Method of	f Sampling	: Lan/ 7	1 aw 50	nb-			s Removed					
Time	Time Intake Rate (ml/min)		Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (μS/cm)	Dissolved Oxygen (mg/L)	Oxidatio Reduction Potentia (mV)	n (color t	Remarks urbidity, and sediment)		
0.445		~150		22,09	6.87	4.93	000	-100	0,51	Amost Crystil		
0950				22,07	6.93	4 92	0.00	-122	-	100000000000000000000000000000000000000		
0955				22,03	6.94	491	0.00	-126	1100			
9000				22.14	PAF	4.90	9.00	-128				
1005			2,5	21.91	6,95	4.87	0.00	-130				
1			- Ji	-11.7.	- 175	1.00			, 5,1			
						9 4						
1			0	1	1		A -	_		-		
		1	51	MOR	10			5		-		
		V	100	Ac								
					18							
					1			21				
								1	l			
			pH CALIB	RATION (choose two				Model or l	Unit No.:		
Buffer Sol	ution		-	pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;										
Instrumen	t Reading											
		CIFIC ELEC	CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ION		Model or l	Unit No.:		
KCI Solutio		μmhos/cm)			1413 at 25°C							
	perature °C									11		
Instrument										0.01		
mot union		OX CALIBI	RATION		DISSOLV	VED OXYGEN	CALIBRAT	ION	Notes:			
Standard :	Solution (m				Altitude / Sal			A	470			
						Field Temperature °C				ensor No		
						Field Temperature °C Instrument Reading (mg/L)						
Model or U					Model or Unit No.:							



Well ID:	AP-1	NW-11				Initial Depth to Water:						
			licate ID: _		13.00							
Sample D	onth:											
Project ar	nd Task No	670	6150	060		Well Dia	pth to Well meter:	2"				
Project N	ame: $\boxed{\mathcal{M}}$	PA GC	Mino	, CC	R	1 Casing	/Borehole					
	-13-1					(Circle one) 4 Casing/Borehole Volumes:						
Sampled	By: <u>5</u>	CM	£1		- [4 Casing/Borehole Volumes:(Circle one)						
Method o	f Purging:	bar	1 11	ow 50			sing/Boreh					
Method o	f Sampling	: Lau	5 / 10	w Ju	.b	Volumes	s Removed:	-				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks turbidity, and sediment)		
1520	520 -200 2647 5					1.89	2,02	221	124	Dirgining Clary		
1525				2553	5,63	1,92	1.52	193	161			
1530				35.50	5.62	1,93	1.17	167	35.4	Clearer bit		
1535				25.35	5.62	1.94	1.03	155	15.0			
1540		~	3.0	2531	5,62	1,95	0,95	148	6.8	Very clear		
1					2							
					0							
							156	-0				
			?	101	100	100	15	9				
					1							
					244							
			PH CALIB	PATION (choose two)			l n	Andel o	r Unit No.:		
Buffer So	lution		pri OALID		pH 7.0				noder o	one no.		
1000	perature °C	:		-	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
	nt Reading											
modumen		CIFIC FLF	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	ı	Model o	r Unit No.:		
KCI Soluti	on (μS/cm=				1413 at 25°C	12880 at 25				V. messar barr.		
	perature °C	1										
Instrumen												
instrumen		OY CALIB	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION	Notes:			
Standard	ORP/REDOX CALIBRATION Standard Solution (mV)						CALIBRAT	.511				
	Field Temperature °C					Altitude / Salinity % Field Temperature °C						
	Instrument Reading (mV)					Instrument Reading (mg/L)						
\	01					Model or Unit No.:						
7,19,119,11	0, 174.0											
									_			



	6	SCA	AA: /						-1.5	wheeler		
Well ID: _	74	131	MW	D .	2	Initial Depth to Water: 27.34 Depth to Water after Sampling: 29.20						
			licate ID:	Dup	0					Section 1 and 1 an		
	epth:		6 15006	CA		Total De	epth to Wel	0//				
Project al	ama: TM	A A	Min	- ((P	Total Depth to Well: Well Diameter:						
	6-13-					1 Casing/Borehole Volume:(Circle one)						
	By: <u></u>					4 Casin	g/Borehole	Volumes:				
			1 flow	5ub		(Circle o						
			w flav	-			sing/Borel s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reductio Potentia (mV)	n (color	Remarks turbidity, and sediment)		
1755	C	150		25.79	4.15	8.45	1.07	278	575	Light tan-cla		
1800				25,22	4.17	8.49	0,89	277	358			
1805	805 25.8					8.49	0.85	280	310	Much clearer		
1810		-200		25,99	4.15	8,35	0.83	284	245	Bumped up rate s		
1815				2538	4.15	8,42	0.80	284	118			
1820				25,33	4.16	8.48	0.78	283	71,3	very light tan-a		
1825			~3,5	25.17	4.16	8.47	0,75	284	48.1	very faintly clave		
CESON N												
					1							
			5	MOL	1	218	25					
			100	. Are	, (210						
			_	- 4								
			pH CALIB	RATION (c	hoose two)				Model or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C					-				· F		
Instrumen	t Reading											
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTAI	NCE (SEC)	- CALIBRATIO	ON		Model or	Unit No.:		
KCI Solution	on (μS/cm=μ	umhos/cm)		1	413 at 25°C	12880 at 25°	°C					
Field Temp	erature °C											
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION		DISSOLV	ED OXYGEN	CALIBRAT	ION	Notes: N	TU increasing		
Standard	Solution (m	V)		A	ltitude / Sali	nity %		C	T like	tomp cranked		
Field Tem	perature °C			F	Field Temperature °C				the par	mp rate then		
	t Reading (ı	mV)			Instrument Reading (mg/L)				gaing down			
Model or l	Jnit No.:			IV	lodel or Unit	No.:			after f	irst reading)		
Document1		. /	/									

EQBK/SCM/061317 Taken @ 1915



M-II ID-	SFL-	Mile	7					-	60	wheeler 8
							epth to Wa		0,00	18,71
	D:		licate ID: _		_		o Water afte			
Project a	Depth: nd Task No	670	6 1500	10		lotal De	eptn to wel	2"		
	lame: 1									
	6-14	-		(PL		(Circle	g/Borehole one)	volume: _		
	ву: 30					4 Casin	g/Borehole	Volumes:		
	of Purging:		flow.	Site		(Circle				
	of Sampling			N JUD			asing/Borel s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color t	Remarks surbidity, and sediment)
1005	~	250		24,71	4.53	10.9	1.47	312	11.6	Vela Cear
1019				24.20	4.51	10.9	113	304	2.3	7(9)
1015				24.89	4.50	10.9	0.99	304	0,0	
1020				24.60	4.47	10.9	0,20	305		Clysial clean
1025				24.68	4.44	11.0	083	310	0.0	1 195 1 516
1030	-3.0 21.64 4.44 10.9 0.81					310	0.0			
						10.7	Chai	3.0		
	Sample					030		,		
		<u> </u>	pH CALIB	RATION (choose two)				Model or	Unit No.:
Buffer Sol	lution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C	;								
Instrumen	nt Reading									
			CTRICAL C	ONDUCTA	ANCE (SEC)	- CALIBRATI	ON		Model or	Unit No.:
KCI Solution	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C			
Field Tem	perature °C									
Instrument										
		OX CALIBR	RATION			ED OXYGEN	CALIBRAT	ION	Notes:	
						nity %				
					Field Temperature °C					
	nt Reading (mV)			Instrument Reading (mg/L) Model or Unit No.:					
Model or	Unit No.:				viodel or Unit	t No.:		-		
Document1										



										111100101		
Well ID: _	SSPA	1W-2			Initial Depth to Water: <u>21.78</u>							
Sample ID):	Dup	licate ID: _									
						Total De	epth to Well	: 46.9	,			
Project an	d Task No	6706	150060			Well Dia	meter: 2	H				
			bons Cree			1 Casing (Circle o	g/Borehole	Volume: _				
						4 Casing/Borehole Volumes:						
Sampled I	By:	1	Λí			(Circle o	one)	volumes				
		lon					asing/Boreh					
Method of	Sampling	j:Su	bmersible	e		Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
1004	44.5	4.5 \$200 24.66 4.90 10.0 3.08 1							140	It. tan ; no odor		
1009	1	1		24.81	4.89	9.96	2.60	131	184			
1014				24.77	4.85	9.92	2.49	146	187			
1019				24,83	4.83	9.90	2.48	161	156			
1024				25.07	4.79	9.89	2.54	177	140			
1029					4.78	9.87	2.58	188	104			
1034	V	V	≈ 2,5	25.40	6 4.76	9,86	2.59	197	940	V		
-				1	1	1						
		(Dam	ples	s la	ken-						
			pH CALIB	RATION	(choose two)		N	lodel or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °0	0										
Instrumen	t Reading											
	SPE	CIFIC ELEC	CTRICAL C	ONDUCT	ANCE (SEC)	- CALIBRATI	ON	N	lodel or	Unit No.:		
KCI Solutio	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Temp	perature °C	;										
Instrument	Reading	Ş.										
	ORP/RED	OX CALIBI	RATION		DISSOL	VED OXYGEN	CALIBRAT	ION N	lotes:			
Standard Solution (mV) Altit						inity %		F	ad bea	inning to crack		
Field Temperature °C Fie					Field Temperature °C Poor recharge					echarae		
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or Unit No.:					Model or Un	it No.:						
D									-			



Well ID:	ST	La M	W-2			Initial Depth to Water:						
Sample ID):	Dup	licate ID: _			Depth to Water after Sampling:						
Sample D	enth:					Total De	pth to Well	:				
Project ar	nd Task No	670	61500	60		Well Dia	meter:	3"				
Project Na		MPA G	SC M		CR	1 Casing/Borehole Volume:(Circle one)						
	Ву:	- 10	£			4 Casing/Borehole Volumes:(Circle one)						
Method of	Purging:	- Law	114	N SUI	<u> </u>		sing/Boreh	nole				
Method of	f Sampling	: Law	Har	Sub		Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tu	Remarks urbidity, and sediment		
1105		~200		24,05	5,75	7,93	1,54	245	205	Shight by Claver		
1110				24.47	5.81	10.0	0.98	223	38.2	rlearing		
1115				24.39	5.91	10:1	0.87	186	12.8			
1120				24,61	5,99	19,1	0.80	164	6,2			
1125			20	2967	6.03	19,1	0.77	154	3,1			
1130	1130 ~30 24.72 6					19,1	0.74	147	2,0	Clystal Clear		
$\overline{}$				1	1	/ / /						
			5	avro e	0/0	0 15	9					
				T	C	11.						
1255	FA	BK/s	SCM/C	1614	7	Taken	a 1	255)			
1000		VY	pH CALIB	RATION (c	hoose two			M	lodel or U	Init No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0			1			
Field Tem	perature °C	;										
Instrumen												
	SPE	CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	IV	lodel or U	Init No.:		
KCI Solutio	n (μS/cm=	μ mhos/cm)			1413 at 25°C	12880 at 25°	°C					
Field Temp	erature °C											
Instrument	Reading											
	ORP/RED	OX CALIBI	RATION		DISSOL	/ED OXYGEN	ION N	lotes:				
Standard						inity %						
Field Tem	Field Temperature °C					Field Temperature °C						
Instrumen	t Reading (mV)		Ir	Instrument Reading (mg/L)							
Model or Unit No.:						t No.:						



Sample ID: Duplicate ID: Depth to Water after Sampling: 36.36 Sample Depth: Total Depth to Well: Total Depth to Well: Well Diameter:							
Project and Task No.: 6706150060 Well Diameter: 2"							
TANDO ALL O							
	1 Casing/Borehole Volume:(Circle one)						
Date:							
Sampled By: 4 Casing/Borehole Volumes:(Circle one)							
Method of Purging: 10w flow Total Casing/Borehole							
Method of Sampling: Volumes Removed:							
	Remarks oldity, and sediment)						
1129 49.0' \$300 26.12 6.26 5.60 3.60 61 44.3 c	clear; no odor						
1134 26.22 6.26 5.66 8.62 54 27.4	1						
1139 26,45 6.26 5.65 3.34 51 25.6							
1144 26.72 6.26 5.65 2.20 48 21.3							
1149 V × 2.0 27.02 6.26 5.64 2.13 45 19.0	V						
Dample'S Taken	~						
1255 - EQBK-BJG-061417 taken							
pH CALIBRATION (choose two) Model or Unit	t No.:						
Buffer Solution pH 4.0 pH 7.0 pH 10.0							
Field Temperature °C							
Instrument Reading							
SPECIFIC ELECTRICAL CONDUCTANCE (SEC) – CALIBRATION Model or Unit	it No.:						
KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C							
Field Temperature °C							
Instrument Reading							
ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION Notes:							
Standard Solution (mV) Altitude / Salinity %							
Field Temperature °C Field Temperature °C							
Instrument Reading (mV) Instrument Reading (mg/L)							
Model or Unit No.: Model or Unit No.:							



Well ID:	MNIN	-15				Initial Depth to Water: 4.57						
			licate ID: _			Depth to Water after Sampling: 4.61						
Sample De	epth:					Total De	onth to Well					
Project an	d Task No	: 670	6150	060		Well Dia	meter:	24				
Project Na	me:	NPA C	SC M	ine C	CR	1 Casing/Borehole Volume:(Circle one)						
Date:	6-14- By:	5CM	٧.			4 Casing/Borehole Volumes:(Circle one)						
Method of	Purging:	Law	Flow	Sul		Total Casing/Borehole						
Method of	Sampling	: lout	T GW	5 wb	<u> </u>	Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance /(NS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color	very.	s d sediment)	
1349	~	200		2604	3,50	3,56	1.55	356	681	Mild	HC add	
1345				27,39	3,51	370	1,01	333	1000	yellow-	crange	
1350				28.78	3,51	3,75	9.89	331	440		1	
1355				29.19	3,52	3.77	0.87	329	305		1/	
1400				29.13	3,52	3,76	0.81	328	254	Light	ndra	
1405				29.47	3,52	3.77	0.77	327	208	1		
1410		V-1		09.80	3,53	3.77	120.9	6 3 30	1148	Lighter	yellow	
1415				29.93	3,53	3,77	0.74	330	195	, 1	(2.1.10	
1420		`	^2,5	29.79	3.53	3,77	0.74	332	51,1	cloudy.	sightly be flaw	
		D	2-1	et	0	147	Λ					
		V	arp	200		110	()					
(C)			pH CALIB	RATION (choose two)				Model or	Unit No ·		
Buffer Solu	ıtion			pH 4.0	pH 7.0	pH 10.0			model of	OTHER TO.	T 7	
Field Temp	perature °C											
Instrument	Reading											
	SPEC	CIFIC ELEC	CTRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON		Model or	Unit No.:		
KCI Solutio	n (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25°	C				1.7	
Field Temp	erature °C										1	
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION	Notes:	MU		
Standard S	Standard Solution (mV)					inity %			DINPI	1=4	9,1	
Field Temp	Field Temperature °C					Field Temperature °C					0	
Instrument	Reading (r	mV)		1	Instrument Reading (mg/L)							
Model or U	Init No.:			ı	Model or Uni	t No.:						



Well ID:	SFL	MW -	7	12=	3		epth to Wa		111 1/			
			licate ID:	Up -	_		o Water afte		g:			
Sample D	epth:	1706	1500	60		Total De	epth to Wel	2-1				
Project ar	nd Task No	NA A CC	Mine	04	A							
	6-14-		LINE			1 Casing/Borehole Volume:(Circle one)						
	By:		D.	-		4 Casing/Borehole Volumes:(Circle one)						
Method of	f Purging:	Law	Tlaw	Sub			11.8	nole				
Method of	f Sampling	: Law	Plaw	5 ub.		Total Casing/Borehole Volumes Removed:						
Time	Depth (mi/min) (°C) (pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	Remarks (color, turbidity, and sediment)			
1590		-200		26.15	6.17	6.69	1.36	1	68,2 Claudy -white			
1505				26.88	6.32	7,40	0.95	-20	32.1			
1510				27.38	621	8,63	0.85	# 2	7.9 CROTING			
1515				27,26	6.19	8.90	0.81	13	3.1 poor milly present			
1529				28,21	6.18	2.98	0.79	19	1.0 cleaning			
1525				26.71	6.18	A. 9.07	0.76	23	0.2			
1530		~	2.0	27.00	6.17	9.16	0.83	24	0,3 Crysial Clear			
- 1									Odor Mildly pressi			
			- 1			(5						
		7	MA	2	(a)	IL	3/					
_			upi			1		/				
			pH CALIBI		hoose two)			N	lodel or Unit No.:			
Buffer Soli				pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;					4					
Instrument	t Reading											
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	N	lodel or Unit No.:			
KCI Solutio	n (μS/cm= _l	μmhos/cm)			1413 at 25°C	12880 at 25	°C					
Field Temp	erature °C											
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION		DISSOLV	ED OXYGEN	CALIBRAT	ION N	otes:			
						nity %						
Field Temperature °C Fie					Field Temperature °C							
Instrument Reading (mV)					Instrument Reading (mg/L)							
Model or U	Jnit No.:			N	Model or Unit No.:							



Well ID: 5-L MW-3						Initial Depth to Water:				
Sample ID: Duplicate ID:						Depth to Water after Sampling: 17,74				
Sample I	Depth:	10	/			Total Depth to Well: Well Diameter: 1 Casing/Borehole Volume: (Circle one) 4 Casing/Borehole Volumes: (Circle one) Total Casing/Borehole				
Project a	and Task No	o.: 6101	150C	160						
	Name: 7/	V	CMI	ne CC	R					
	I By:									
	of Purging:	4	flam	546						
Method o	of Sampling	g: Law	flam	506			s Removed			
Time Intake Depth		Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, turbidity, and sediment)	
1625		~200		25.86	3.68	6.95	2.18	395	664	Mild HC ador
1634				26,25		6.96	0.93	384	428	AND IN CHAI
1635				2614	3.66	6.96	1.80	381	áaa	Clearer
1640				2600		6.96	0.74	379	125	
1645				2609	3.65	6.97	0,70	377	74.4	
1650.			25	25.97	3.64	6.96	0,66	378	43.7	Nearly clear
									1	Lightly claus
•										
		75	Jan pla	ed (0 16	550				
			pH CALIB	RATION (choose two)		M	lodel or	Unit No.:
Buffer Solution pH 4.					pH 7.0	pH 10.0				
Field Temperature °C										
Instrumer	nt Reading									
	SPE	CIFIC ELEC	TRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ON	M	lodel or	Unit No.:
CI Solution (μS/cm=μmhos/cm)					1413 at 25°C 12880 at 25°		°C			
Field Tem	perature °C									
Instrumen	t Reading									
	ORP/RED	OX CALIBR	RATION		DISSOLVED OXYGEN CALIBRATION			ION N	otes:	17-11
Standard Solution (mV)					Altitude / Sali	CENTRAL PROPERTY.			low	1
Field Temperature °C					Field Temper				**	
Instrument Reading (mV)					Instrument Reading (mg/L)					
Model or	Unit No.:				Model or Uni					
ocument1										

WELL SAMPLING AND/OR DEVELOPMENT RECORD wheeler Well ID: Initial Depth to Water: Sample ID: _____ Duplicate ID: Depth to Water after Sampling: Sample Depth: Total Depth to Well: Project and Task No.: Well Diameter: Project Name: 1 Casing/Borehole Volume: (Circle one) Date: 4 Casing/Borehole Volumes: Sampled By: (Circle one) Method of Purging: Total Casing/Borehole Method of Sampling: Volumes Removed: Specific Cum. Vol. Dissolved Oxidation-Rate pH Intake Electrical Temp. Remarks Time (gal.) Reduction Oxygen Conductance Depth (ml/min) (units) (color, turbidity, and sediment) (°C) (mg/L) Potential Mus/cm) (mV) ~200 101 0.70 pH CALIBRATION (choose two) Model or Unit No.: **Buffer Solution** pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION Model or Unit No.: 1413 at 25°C 12880 at 25°C KCI Solution (µS/cm=µmhos/cm) Field Temperature °C Instrument Reading

DISSOLVED OXYGEN CALIBRATION

Altitude / Salinity %

Model or Unit No .:

Field Temperature °C

Instrument Reading (mg/L)

Notes: Lowes

Document1

Standard Solution (mV)

Instrument Reading (mV)

Field Temperature °C

Model or Unit No .:

ORP/REDOX CALIBRATION

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		S	¥	4
arr	iec	4	Δ	7
fos		- 1		

Well ID):	NW-18									-0.11		toster wheeler
Sample	e ID:	Du	uplicate ID):			Initia	l Depth to W	/ater: _		9.7	3	
Sample	e Depth:						Dept	h to Water a	fter Sa	mpling	g: <u> </u>	600	15
Project	and Task	No.: 67	0615	m	0		Total	Depth to We	ell:				
Project	Name:	NPA	60	MA	0	CP		Diameter					
Date: _	6	-	,	1 11/1			1 Cas	ing/Borehol	e Volu	me:			
Sample	d By:	50	7										
	of Purging		1 1	an	Sid		(Circle	ing/Borehole e one)	e volu	mes: _			
Method	of Samplin	g: La	in it	19W		ib	Total (Casing/Bore les Removed	hole				
Time	Intake Depth	Rate (ml/min)	Cum. Vo (gal.)	Te	mp.	pH (units)	Specific Electrical Conductance	Dissolved	Oxid	ation- iction ential	(color, tu	Remarks	sediment
13-10		Du 150		23	97	737	467	0.00	(m	(V)	MUL		
1345				25	16.0	7.11	4,53	0.58	161	-	10 V	ery clear	
(350)					,26	690	-	6,76	-4		20		
1955	,			24	911	201	5.43	6.36	-6	2 8	3,0 6	lack to	tyrko
1790				25	15	105	5.07	6.55	-7	7 6	62	and MI	AC. HC
1405				24	94	6.25	506	6.32	-K	18 6	24 =	Carer L	but
1410					/ /	0.00	5.07	621	-11:	5 4	9,2	Sill	grey
1415			3	24.5	3 0	6.84	5.04	6.47	-19	_	DPNO	early cle	arin
X i				- (1)	0	6,84	5,03	T 03-7	-10			loudy -c	
			5 • •								10	andy -c	legr.
		6	LA	1		114 1							
	7	ary	(JP.									
4					-								
		р	H CALIBR	RATION	l (cho	pose two)							
Buffer Soluti	ion			pH 4.0		pH 7.0	ti es -			Mode	or Unit	No.:	
Field Tempe	erature °C		7%	P. 1.1.0	-	рп 7.0	pH 10.0						
Instrument R	Reading				-								
(E		IC EL ECTE	1011										2
KCI Solution (/u.C/om-	IC ELECTR	ICAL COI	NDUCT	ANC	E (SEC) -	CALIBRATION	٧		Model	or Unit N	VI-	
	(μο/cm-μm	hos/cm)				3 at 25°C	12880 at 25°C			Model	or Onit i	VO.:	
Field Tempera												-	
Instrument Re												8	
OF	RP/REDOX	CALIBRAT	ION		D	ISSOLVED	OVVOT						
Standard Solu					Altitu	de / Salinity	OXYGEN CA	LIBRATION	1	Votes:	Pump	Strugg	1100
Field Tempera										Up	ped :	fland	ring,
Instrument Re						Temperatu			1	ate	ocras	ignall.	1
Model or Unit	No.:			1	Mode	ment Read	ing (mg/L)			cep	UP	- III	10
				1	MOUE	l or Unit No				/	1.		
Ocument1	0	a to.	1			-			^	Tu	Stort.	an.	
	Bu	19 fars.			Tu	rb. V.	sible		Ä	10/	Moll	41	_/-
		+ 1 11	. 0	•	1		- 10-		to	1000	1	Inc	9
	1	10 neson	ON)	10	7	1.101		A . 1	3.0	01-0		lack	1

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	(X)
amec	
foster	
whaste	

Well ID:	48	MANN	SFI	MW-		Initial D	anth to 18/-		3 h	wheeler
	D:		-				epth to Wa			14.41
	Depth:						o Water aft			
	nd Task No		150060	7		Well Di	eptil to wei	2"		
Project N	ame: N	PA G	Mine	CCR						
	6-28-					(Circle	one)	volume		
Sampled	Ву:	SCM				4 Casin (Circle o	g/Borehole	Volumes:		
Method o	f Purging:	Law	Flaw s				asing/Borel	nole		
Method o	f Sampling	: Law	Flaw	5 W.		Volume	s Removed	:		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance MuS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)
1220		人可愛	1	24,71	6.58	623	323	-58	33,3	Slightly cloudy
1225	V	-200		26H	6.54	6.99	2.10	-61	117	Mad HE adan
1230				25,41	6.40	226	1.87	-24	0.0	Almost crystal
1235				25,31	6.33	8.99	174	-11	0.0	ador still present
1240				25,25	632	9.21	1.67	-8	0,0	7
1245				25.35	6.31	9,28	1.61	-7	0.0	11
1250		V	2.5	25.17	6.32	9.39	1.69	-8	0,0	71
			Sany	ole a	1	2 10	50			
			pH CALIBR	RATION (c	hoose two)			M	odel or	Unit No.:
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0				STILL TVO
Field Temp	perature °C									
Instrument	Reading									
	SPEC	IFIC ELEC	TRICAL CO	NDUCTA	NCE (SEC) -	- CALIBRATIC)N	M	odel or	Unit No.:
KCI Solution	n (μS/cm=μι				1413 at 25°C	12880 at 25°0			010101	Offic No
Field Tempe	erature °C									
Instrument	Reading									
	ORP/REDO	X CALIBR	ATION		DISSOLVI	ED OXYGEN C	ALIBRATIO	ON NO	tes:	
Standard S	Solution (mV)		А	Ititude / Salin			IV.		
Field Temp	erature °C				ield Tempera					
Instrument	Reading (m	V)				ading (mg/L)				
Model or U	nit No.:		-		odel or Unit		I			
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1000000	A4									Wileelei
	WMM-					· Initial D	epth to Wa	ter:	4.59	1
			olicate ID: _			Depth to	o Water afte	er Samplin	g:	4,63'
	epth:		1500/0			Total De	epth to Wel	l:		
			150060		<u> </u>	Well Dia	ameter:	2"		
Project Na	ame: $\frac{1}{6}$	PA GO	Mine	e cel)	1 Casin (Circle o	g/Borehole	Volume: _		
	Ву:					4 Casin	g/Borehole	Volumes:		
	f Purging:	- 1	Flow Sv	16		(Circle o	one)			
	f Sampling	Λ.	Flaw S				asing/Borel s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color	Remarks turbidity, and sediment)
1320	-	200		25.80	3.51	3,81	4.05	358	173	Olonge-brown
1325				25,72			1.89	319	337	Mild HC oder
1330				262	5 3,48	3,93	165	320	61.1	Light tan
1335		3	Polico	26,2	7 3,48	3.93	1.56	320	16,8	
1340			~2.0	26,16	3.48	3,94	1.51	319	5,3	
		\	Sar	pled	0	1349				Still present
			pH CALIBI	RATION (c	choose two)				Andel or	Unit No.:
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0			1000101	Offic No.:
	perature °C			<u> </u>	1	F				
Instrument	Reading									
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	CALIBRATIO	ON	N	Model or	Unit No.:
KCI Solutio	n (μS/cm= _l	umhos/cm)			1413 at 25°C	12880 at 25°	С			
Field Temp	erature °C									
Instrument	Reading									
7-1.0 110	ORP/RED	OX CALIBR	RATION		DISSOLV	ED OXYGEN (CALIBRATI	ON N	lotes:	William I all I
Standard S	Solution (m	V)		A	Altitude / Salir			+	MA L	ARMI HALLIE
Field Temp	oerature °C				Field Temperature °C					
Instrument	Reading (mV)		Ir	Instrument Reading (mg/L)					
Model or U	Init No.:			N	Model or Unit No.: 2500 between 1st					between 1st
Document1								16	10 0	



Well ID:	MM	N-18				Initial Depth to Water: 9,71						
Sample II	D:	Dup	licate ID: _	DUP-	1		o Water afte			15.52		
Sample D	epth:					Total De	epth to Wel	1: 51				
Project ar	nd Task No	o.: <u>67</u> 0	26150	1060		Well Dia	ameter:	411				
Project N	ame: 1	MPA	GCMIV	1c C	CR			Volume: _				
	7-19					(Circle one) 4 Casing/Borehole Volumes:						
Sampled	By: <u>50</u>	- \(\rangle\)	11			(Circle	one)	volumes.				
		Lan	N 1			Total Ca						
Method o	f Sampling	: La	~) 11	aw 5	rp_	Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	(color	Remarks turbidity, and sediment)		
1200		~150		25,76	6.72	4.70	0,90	-77	0,0	clear it of		
1205				27.7	668	4,69	0,75	-88	0.0	1 - 10 (1 - 50)		
1219				27,9	56,67	4.69	0.79	-90	0-0	Same		
1215		V	1.0	286	1 6.68	4,67	0,64	-93	0.0	adar Paded		
	>									Slightly		
				- 1	0	101	5					
		>	ampl	20	(0)	121	\supset					
	/		V			,			-			
	11								-			
			pH CALIB	RATION (choose two)	Ware and			Model or	Unit No.:		
Buffer Sol	ution				pH 7.0				VIOGOT OF	OTHER TOO.		
Field Tem	perature °C)										
Instrumen												
		CIFIC ELEC	CTRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATI	ION		Model or	Unit No.:		
KCI Solution		μmhos/cm)			1413 at 25°C							
	perature °C											
Instrument	t Reading											
	ORP/RED	OX CALIBI	RATION		DISSOLV	/ED OXYGEN	CALIBRAT	ION A	Notes:			
Standard	Solution (m	nV)		,	Altitude / Salinity %				DUP	-I Take		
Field Tem	Field Temperature °C Fi					Field Temperature °C						
Instrument Reading (mV) Inst					Instrument Reading (mg/L)							
Model or Unit No.: Mod					Model or Unit No.:							

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WELL SAMPLING AND/OR DEVELOPMENT RECORD foste wheeler Well ID: Initial Depth to Water: Sample ID: Duplicate ID: Depth to Water after Sampling: Sample Depth: Total Depth to Well: Project and Task No.: Well Diameter: **Project Name:** 1 Casing/Borehole Volume: (Circle one) Date: 4 Casing/Borehole Volumes: Sampled By: (Circle one) Method of Purging: Total Casing/Borehole Volumes Removed: Method of Sampling: Specific Cum. Vol. Dissolved Oxidation-Intake Rate рН Electrical Temp. Remarks (gal.) Time Oxygen Reduction Conductance Depth (ml/min) (color, turbidity, and sediment) (units) (°C) (mg/L) Potential (45/cm) (mV) 1005 ~300 010 1015 10170 pH CALIBRATION (choose two) Model or Unit No .: **Buffer Solution** pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION Model or Unit No .: KCl Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading **ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION** Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No .: Model or Unit No.:

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			- 7				epth to Wat		017	14.61				
			icate ID:			Depth to Water after Sampling:								
Sample D	epth:	. 170	161590	260		Well Diameter: 2 "								
Project N	id Lask No	TMO A	GCI	1 no C	CR									
Date:	7-2	0-17	,	(67)		(Circle o	one)							
	Ву:		A -			4 Casing (Circle of		Volumes: _						
	_	Can	, flaw	Sul			asing/Borel	nole						
Method o	f Sampling	:_(0	wtle	un Jib		Volume	s Removed	:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks , turbidity, and sedi				
1120		~150		27.34	654	656	0.91	-40	9,0	Very Mild H				
1125		100		28.55	653	667	0.89	-54	19,5	Verg Tile II				
1130				28,83	0	6.53	0.54	-69	13,7					
(135				28,69	641	8.18	0.51	-44	0.6					
1140				2843	636	8.61	0,44	-38	0,0	Odar Na				
1145			~1.5	28.54	1 634	8.86	0,42		4.9	,				
1						3,00								
			1		4		1							
			1	5	MARA	19	1145							
					apple Co	C	1110							
				1										
									4 1 1	I I I I I I I I I I I I I I I I I I I				
			pH CALIE		choose two				Model (or Unit No.:				
Buffer So	olution			pH 4.0	pH 7.0	pH 10.0								
Field Ter	nperature °	С												
Instrume	nt Reading													
	SPE	ECIFIC ELE	CTRICAL C	CONDUCTA	ANCE (SEC) - CALIBRAT	ION		Model	or Unit No.:				
KCI Solut	ion (μS/cm	=μmhos/cm)		1413 at 25°C	12880 at 2	5°C							
Field Ten	nperature °(С												
Instrume	nt Reading													
	ORP/RE	DOX CALIE	BRATION		DISSOL	VED OXYGEN	CALIBRA	TION	Notes:					
Standard	d Solution (mV)			Altitude / Sa	alinity %								
Field Te	mperature °	°C			Field Temp	erature °C								
Instrume	ent Reading	ı (mV)			Instrument	Reading (mg/L	.)							
Model o	r Unit No.:				Model or U	nit No.:								

AND/OR DEVELOPMENT RECORD foster Well ID: SFL MW-Initial Depth to Water: Sample ID: ____ Duplicate ID: Depth to Water after Sampling: 16.68 Sample Depth: Total Depth to Well: Well Diameter: Project and Task No.: 6706 1500 60 Project Name: TMpA GC 1 Casing/Borehole Volume: ____ (Circle one) Date: 8-22-17 4 Casing/Borehole Volumes: ___ Sampled By: 50M (Circle one) Method of Purging: Low Total Casing/Borehole Method of Sampling: 1 000/ Volumes Removed: Specific Cum. Vol. Dissolved Oxidation-Intake Rate Electrical Temp. pH Remarks (gal.) Time Reduction Oxygen Conductance Depth (ml/min) (°C) (units) (color, turbidity, and sediment) (mg/L) Potential (mS/cm) (mV) Low Flow Stabilization Criteria +/- 3% +/- 0.1 +/- 3% +/- 10% +/- 10% MIU ~200 59 6,00 pH CALIBRATION (choose two) Model or Unit No .: **Buffer Solution** pH 4.0 pH 7.0 pH 10.0 Field Temperature °C Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SEC) - CALIBRATION Model or Unit No .: KCI Solution (μS/cm=μmhos/cm) 1413 at 25°C 12880 at 25°C Field Temperature °C Instrument Reading **ORP/REDOX CALIBRATION DISSOLVED OXYGEN CALIBRATION** Notes: Standard Solution (mV) Altitude / Salinity % Field Temperature °C Field Temperature °C Instrument Reading (mV) Instrument Reading (mg/L) Model or Unit No .: Model or Unit No .:

WELL SAMPLING



Well ID:	SFL	MW-	3			Initial D	epth to Wa	ter:	7.40			
Sample II	D:	Dup	licate ID: _			Depth to Water after Sampling:						
	epth:					Total De	epth to Wel	1:				
			16150		204	Well Dia	ameter:	2"				
			GC M	line (CR			Volume: _				
	8-2					(Circle o						
	Ву:	1	11	1		(Circle	g/Borehole one)	Volumes: _		-		
	f Purging:		1 - 1-	5 W			asing/Borel					
Method o	of Sampling		- Ha	w 5wb		Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	Mul	Light		
1730		~200		27.0	3 3.70	6.83	5.41	361	215			
1735				28.43	3,69	7.08	1.13	370	398	HA HE GALLI		
1740				29.36	3.70	7,20	0.88	372	372	Slightly clearer		
1795				28.70	3.69	7,23	0.76	375	194) , = :-		
1750				26.81	3.66	7.32	9.72	376	186	NTU Climbing		
1755				26.29		7,22	0,60	376	396	NTV dropping		
1800				26.24	3.68	7.19	0,68	376	184	clearer"		
1805				26.18	3.67	7.17	0.62	376	122			
1810	-		3,5	2601	3,67	7,16	2,67	376	81.1	Nearly Jear		
				0		0.0				Cloudy		
	F	7	ampl	ed	a.	410						
			pH CALIBI	RATION (choose two)			M	lodel or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				0.179/6/83		
Field Tem	perature °C	;								, and the second		
Instrumen	t Reading											
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATION	ON	M	lodel or	Unit No.:		
KCI Solutio	on (μS/cm= _l	umhos/cm)			1413 at 25°C	12880 at 25°	C					
Field Temp	perature °C											
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION	113	DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes: \	MIA		
Standard	Solution (m	V)		1	Altitude / Sali	nity %			Land	0<1~80		
Field Tem	perature °C				Field Temper	rature °C			- WW			
Instrumen	t Reading (ı	mV)	4	1	Instrument R	eading (mg/L)						
Model or l	Jnit No.:			1	Model or Unit	t No.:						
		1										
EQ	BK	150	M/Q8	328	2 2	Jaken (@ 1	850				

1850



Well ID:	MNW	-15				Initial D	epth to Wa	ter: 5.	21'	
Sample I	D:	Dup	licate ID:	DUP-	1		o Water afte			19'
Sample D	Depth: 💥	25.0'					epth to Wel			
Project a	nd Task No	o.: 67061	50060							
Project N	lame: TW	1PA-Gil	bons Cre	ech		1 Casin	g/Borehole			
Date: _/	August	22,201	7			(Circle				
Sampled	By:	1	1.			4 Casin (Circle o	g/Borehole one)	Volumes:		
Method o	of Purging:	low	flow				asing/Borel	nole		
Method o	of Sampling	: per	istaltic				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	1	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTL	
1655	25.0	× 200		29.8	7 3.55	3.68	Ø.94	355	97.6	Clear; no oder
1700	1			29.1		3,79	9.49	360	29.1	
1705				28.63	3.46	3.82	0.27	359	Ø. Ø	
1710				28,2	7 3.42	3.82	\$.19	358	9.0	
1715	V	V	₹1.5	28,11	3.42	3.82	9.14	357	9.9	V
			Sai	nple	25 7	Taken				
			pH CALIBI		(choose two			M	lodel or	Unit No.:
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				
Field Tem	perature °C									
Instrumen	t Reading									
	SPE	CIFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC) - CALIBRATIO	ON	M	odel or	Unit No.:
KCI Solution	on (μS/cm= _l	umhos/cm)			1413 at 25°0	12880 at 25°	c			
Field Temp	oerature °C									
Instrument	Reading									
	ORP/RED	OX CALIBR	RATION		DISSOL	VED OXYGEN	CALIBRATI	ON N	otes:	
Standard	Solution (m	V)			Altitude / Sa	alinity %		D	up-1	
Field Tem	perature °C				Field Tempe	erature °C				
Instrumen	t Reading (ı	mV)			Instrument I	Reading (mg/L)				
Model or l	Jnit No.:				Model or Ur	nit No.:				



				100						wheeler
Well ID: _	ARM	W-3				Initial D	epth to Wa	ter: _ /0.	60	THI COLO
Sample II	D:	Dup	licate ID: _				o Water afte			091
Sample D	epth:	141'					epth to Wel			
			6150060				ameter:			
			ibbons C	reek		1 Casin	g/Borehole	Volume:		
Date:	August	22,201	7			(Circle o	one)			
	Ву:		Α.			4 Casing (Circle of	g/Borehole	Volumes:		
Method o	f Purging:	low	flow				asing/Borel	nole		
Method of	f Sampling	: per	istaltic				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	The same of	Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	1
1825	241'	\$150		28,21	4.94	1.82	1.78	280		Clear; no odor
1830	j			26.73	4.93	1.85	\$.66	311	Ø. Ø	I I OHO!
1835				26.20	4.87	1.87	Ø.30	320	Ø. Ø	
1840				26,26		1.85	Ø.17	322	Ø.0	
1845	V	V	₩1.5	26.06	4.79	1.85	9.14	324	4.0	
				/		+1				
			\bigcirc a	mple	5 1	aker	1			
				1				Ð		
			pH CALIBI	RATION (d	hoose two)			M	odel or	Unit No.:
Buffer Solu	ıtion			pH 4.0	pH 7.0	pH 10.0				
Field Temp	erature °C									
Instrument	Reading									
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTA	NCF (SFC)	- CALIBRATIC	ON :	M	adal ar	Unit No.:
KCI Solution					1413 at 25°C	12880 at 25°0		IVI	odel of	Offit No.:
Field Temp					1410 0120 0	12000 at 25 V				
Instrument										1
		OX CALIBR	ATION	NO. 80 /S	DICCOLL	ED OWNOEN A				
Standard S			ATION			ED OXYGEN (JALIBRATI	ON N	otes:	
Field Temp					Ititude / Salir					
Instrument					ield Tempera					
Model or U		114)			lodel or Unit	eading (mg/L)				
					- Tree all all					



										wheeler
Well ID: _	SFL	MW-6				Initial D	epth to Wa	ter:17.	821	
Sample ID):	Dup	licate ID: _			Depth to	o Water afte	er Sampling	: 20	2.86'
Sample D	epth:	21'					epth to Wel			
		o.: <u>6706</u>				Well Dia	ameter:	2"		
Project Na	ame: _TN	npa-Gi	bbons Cr	eek		1 Casin	g/Borehole	Volume:		
Date:A	ugust à	73, 201	7			(Circle o				
Sampled I	By:	7				4 Casing	g/Borehole	Volumes:		
Method of	FPurging:	lowt	1000				asing/Borel	nole		
Method of	f Sampling	: peri	staltic				s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks turbidity, and sediment)
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	
0935	21'	4150		26.2	7 3.96	12.5	1.36	465	1.5	Clear; no odor
8940				26.21	3,97	12.6	Ø.74	483	0.0	1
0945				26,09	3.95	12.7	\$.66	479	0.0	
0950				26.0	7 3,97	12.7	Ø.48	462	0.0	
0955	¥	V	₩1.0	25.98	3.98	12.7	Ø.42	457	0.0	8
		-	9	1	-	/				and the second
			amp	es	10	Ken				
			4		1					1
12										
			pH CALIBR	RATION (choose two	1		M	lodel or	Unit No.:
Buffer Solu	ition			pH 4.0	pH 7.0	pH 10.0				
Field Temp	erature °C									
Instrument	Reading									
	SPE	CIFIC ELEC	TRICAL CO	NDUCTA	NCE (SEC)	- CALIBRATIO	ON	M	odel or	Unit No.:
KCI Solution					1413 at 25°C	12880 at 25°			000101	OTHERVO
Field Tempe										
Instrument I										1
	0	OX CALIBR	ATION	A. 11	DICCOLL	/FD OVOYOFILE		20.7.7.7		
Standard S			ATION		Altitude / Sali	/ED OXYGEN (CALIBRATI	ON N	otes:	
Field Temp					Field Temper					
Instrument						eading (mg/L)				
Model or U					Model or Unit					



Well ID:	SMAN NO	W-15	+ 5	FLI	1W-7	Initial D	epth to Wa	ter: 14.	15	wheeler
Sample II	D:	Dup	licate ID: _							15,03
Sample D	epth:						epth to Wel	_ 11 -		
Project a	nd Task No	D.: 670	D6 150	060.	904	Well Dia	ameter:	2	1	
	ame:		GC	Mhe B-2-			g/Borehole			
	Ву:	1	1				g/Borehole	Volumes:		
		La		own SV			asing/Borel	nole		
Method o	f Sampling	j:	Law	Tour	Sub		s Removed			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, tu	Remarks urbidity, and sediment)
Low	Flow Stab	ilization Cri	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NIV	Mary clear
749	\	150		25.08	6.27	6.74	0.89	-19	8.2	mostly clear
745				25.14	6.22	8.26	0.68	-6	0.5	No Cobr of to
454		7		25.07	6.19	8,88	0,63	15	0.6	
455				25.10	6.20	2.90	0,53	17	0.0	Crystal clear
1000		`	-2	25, 14	6.21	8.96	0.54	15	2.0	
		PC	Eamp le	ed	@	1000)			
	1.7									*
D-#0-1		*'G:	pH CALIBR		choose two)			M	odel or U	nit No.:
Buffer Solu				pH 4.0	pH 7.0	pH 10.0				
	perature °C	1								
Instrument	Reading									
	SPEC	IFIC ELEC	TRICAL CO	NDUCTA	NCE (SEC)	- CALIBRATIO	ON	М	odel or U	nit No.:
KCI Solutio	n (μS/cm=μ	mhos/cm)			1413 at 25°C	12880 at 25°	С			
Field Temp	erature °C									
Instrument	Reading									
0	ORP/REDO	X CALIBR	ATION	1	DISSOLV	ED OXYGEN (CALIBRATI	ON N	otes:	- 7
Standard S	Solution (m\	/)		1	Altitude / Sali					
Field Temp	erature °C				Field Temper					
Instrument Reading (mV)					Instrument Reading (mg/L)					
Model or U	nit No.:				Model or Unit					



Well ID: _	SFL	MW-			Initial Depth to Water: 16, 40								
Sample II	D:	Dup	licate ID: _				o Water afte			79			
	epth:												
Project a	nd Task No	o: 670	61500	260.	004	Total Depth to Well: Well Diameter:							
Project N	ame:	MPA G	FC M	ne Co	R	1 Casing/Borehole Volume:							
Date:	1-23-	17				(Circle o							
Sampled	Ву:	SCM				4 Casing (Circle of	g/Borehole one)	Volumes:					
Method o	of Purging:	Low	Flow	5W			asing/Borel	nole					
Method o	of Sampling	g:	on fla	w sul)		s Removed						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	K	Remarks dity, and sediment)			
Low	Flow Stab	ilization Cri	teria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	# Sm				
1045		-200		25,39	7 4.61	11.3	2.12	315	Mast av	mostly clear			
1050				26.18	4.59	11.3	1.00	310	5.5				
1055				a7.11	4.60	11,3	0.79	312	(,)				
1100				26.0	7 4.57	11.3	0,68	316	Q.C	Crystal			
1105			~2	26.2	8 4.58	11.3	0.67	320	0,5				
						- 2							
		D	Sar	pled	@ 1	105							
			nH CALIB	PATION (choose two)				Andal and it	N			
Buffer Sol	ution	*	PIT CALIB		pH 7.0				Model or Unit	No.:			
				pn 4.0	pH 7.0	pH 10.0							
	perature °C	,											
Instrumen	t Reading					7 A 7 19 3 S 7 S	17.17						
			TRICAL C	ONDUCTA		- CALIBRATIO		N	Model or Unit	No.:			
		μmhos/cm)			1413 at 25°C	12880 at 25°	,C						
Field Temp	perature °C												
Instrument	Reading												
		OX CALIBR	RATION	- Feb.	DISSOLVED OXYGEN CALIBRATION				lotes:				
Standard	Solution (m	V)			Altitude / Sali	nity %							
Field Tem	Field Temperature °C					Field Temperature °C							
Instrument Reading (mV)					Instrument Reading (mg/L)								
Model or l	Model or Unit No.:					t No.:							



Well ID: _	MNW-	-18				Initial Depth to Water:						
			licate ID: _				Water after			29'		
	epth: 4					Total De	epth to Well	: 51.0'				
Project a	nd Task No	.: 6706	150060			Well Dia	meter:	1"				
Project N	ame: _T/\	1PA - Gib	bons Cree	k		1 Casing	g/Borehole					
	August 2					(Circle o						
	Ву:		///			4 Casing	g/Borehole one)	Volumes: _				
	f Purging:					Total Ca	sing/Boreh	ole				
Method o	f Sampling	: _ 5ubin	nersible			Volume	s Removed	:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks turbidity, and sediment)		
Low	Flow Stabi	lization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU			
1129	48.5	×150		27.69	6.82	4.47	1.20	-60		Clear; slight sulfur od		
1134	1	1		27,85	6.77	4.71	Ø.53	-83	Ø. Ø	1		
1139		- Au		28.15	6.69	4.85	Ø.33	-98	4.0			
1144				28.54	1 6.69	4.87	9.25	-102	0.0			
1149	V	V	21.0	28.66	6.70	4.90	Ø.22		0.0	1		
_			,	-	1	100						
		- ()am	pk:	5 / 9	Ken						
				•								
		-										
	-		-II CALIDI	DATION (e eu euer					
D. # 0-1	0		PH CALIBI		choose two			N	lodel or	Unit No.:		
Buffer Sol				pH 4.0	pH 7.0	pH 10.0						
	perature °C			,								
Instrumen	t Reading											
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATIO	NC	N	lodel or	Unit No.:		
KCI Solution	n (μS/cm=μ	umhos/cm)			1413 at 25°C	12880 at 25°	С					
Field Temp	erature °C											
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION		DISSOLV	/ED OXYGEN	CALIBRATI	ON N	otes:			
Standard S	Solution (m	V)			Altitude / Sal	inity %						
Field Tem	perature °C				Field Temperature °C							
Instrument	t Reading (r	mV)			Instrument Reading (mg/L)							
Model or U	Jnit No.:				Model or Unit No.:							



Well ID:	SFL	MW-	2			Initial D	epth to Wat	ter:	1.36	WI leetel		
		Dup					o Water after			12.64-		
12.000.002							epth to Well					
Project a	nd Task No	o.: 670	261500	60,00	Well Diameter:							
Project N		MAA 6					g/Borehole					
Sampled	By: <u>50</u>	M		,		4 Casing	g/Borehole one)	Volumes:	s:			
		Low T					asing/Borel s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	4 4 4	Remarks rbidity, and sediment		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	_	1-14		
1135		~300		36,10	5.80	10.3	1.07	226	97,3	cloudy white		
1140				26.23	5,86	10,3 (2.67	223	17.3	learing		
1145				2630	5.96	10.3	0.57	214	5.4			
1150				2624	6.03	103	0.51	205	4,8	Clearer		
1155				26,49	6,08	10,3	047	2 193	0.0	Crystal clear		
1200		•	rd	86.87	6.09	10,3	0,44	1881	0.0	COC TOUCH		
		75	ante	1	0	200						
			pH CALIB	RATION (c	hoose two			N	lodel or U	nit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;										
Instrumen	Reading											
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTAI	NCE (SEC)	- CALIBRATION	ON	N	lodel or U	nit No ·		
KCI Solutio		μmhos/cm)			413 at 25°C	12880 at 25°						
Field Temp	erature °C											
Instrument	Reading											
	ORP/RED	OX CALIBR	RATION	DISSOLVED OXYGEN CALIBRATION					otes:			
Standard	Solution (m	V)		А	ltitude / Sali							
Field Tem	Field Temperature °C					Field Temperature °C						
Instrumen	Reading (mV)		Instrument Reading (mg/L)								
Model or U	Model or Unit No.:				lodel or Uni	t No.:						



	55/				Initial Depth to Water:							
Sample II	D:	Dup	licate ID: _			Depth t	o Water afte	er Samplin	g:	14,39		
	epth:		. /	(0.0	2.(1)	Total D	epth to Wel	l:				
		o.: 670				Well Dia	ameter:	2"				
		MPA	66	Mir	CCK	Volume: _						
	8-23					Valumas						
	Ву:		N 1			(Circle	g/Borenoie one)	volumes:				
		Law I				Total Casing/Borehole Volumes Removed:						
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks urbidity, and sed		
	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	-	Brow		
1310		~300		27.7	25.86	8,54	1.36	-3	226	Light yell mild He ad		
1315				29,2		8.63	0.86	. 3	345	No dubi		
1520				29.87	5.83	8.64	0.70	6	439			
1525				30.05		~	0,59	7	505			
1530				30,19	-	8,62	0,51	8	527	No slaw		
1335				27.91			0,45	12	452	Clearing of		
1349				2809	5.80	8.54	0.40	15	2411	Clearing		
1545				28.23	5.80	8.57	0,36	16	164	clearing		
1350		4	12,5	28,3	5 5.80	2,58	0,34	17	119	Light sell		
1			1	1						- J. W. yen		
		1	9 5	amole	00	135	0					
				1						l		
			pH CALIB	RATION ((choose two)			N	lodel or U	Init No.:		
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C											
Instrument	Reading											
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCT	ANCE (SEC)	- CALIBRATION	ON	N.	lodel or U	nit No :		
KCI Solutio					1413 at 25°C	12880 at 25°			0001010	THE INO		
Field Temp					77.10 41.20 0	12000 dt 20						
Instrument		н										
		OV CALIBE	ATION		Diocet	ED COMP				A .		
731	Solution (m)	OX CALIBR	AHON			ED OXYGEN	CALIBRAT	ON N	otes:	IV		
	perature °C			-	Altitude / Sali		1		MAX	= 520		
	TEAC SHE TO		12		Field Temper	7. UNIVERSE				530		
Inetriimant		117)				eading (mg/L)			- ew	St 5/16		
Instrument	THE INO.			- 1	Model or Unit	No.:			-400	- 11		
Model or U												



Well ID:	55F	> MW	1-2			Initial D	epth to Wa	ter: 21	.95	Wileelei	
	7	Dup									
Sample D	epth:					Total De	epth to Wel	1:		-0.10	
Project a	nd Task No	o.: <u>670</u>	615000	50,00	14	Well Dia	ameter:	2"			
Project N	ame:	IMPA	GC	Mine	CCR		g/Borehole				
Sampled	Ву:	SCM	1	1		4 Casin (Circle	g/Borehole one)	Volumes:			
1. A. 1895, 3-53		Low Low	11			Total Ca Volume	asing/Borel s Removed	nole :			
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks turbidity, and sediment	
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		tight	
910		200cm		23.8	7 454	9,88	1.46	200	221	Light brown	
415				23,97		9,88	1,09	193	157	clearing	
920				24.41	4.59	9.85	0.83	20 195	88.4	clarina	
925				24,28	4.58	9.82	0.98	200	66,0		
930			1.5	24.75	455	9,81	0,94	211	75,4	Still light	
		75	an y	ies	100	09	30				
			nH CALIB	RATION (choose two)				La de la constante de la const		
Buffer Soli	ution		PITOALID	pH 4.0	pH 7.0	pH 10.0		IV	lodel or	⊎nit No.:	
	perature °C			pi 1 4.0	pri 7.0	рн то.о					
Instrument					1						
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATIO	ON	M	lodel or	Unit No.:	
KCI Solutio		μmhos/cm)			1413 at 25°C	12880 at 25°		IV.	lodel of	Offic (No.:	
Field Temp	erature °C										
Instrument	Reading										
F		OX CALIBR	ATION		DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes:		
Standard S	Solution (m				Altitude / Salinity %				-100.		
Field Temp	oerature °C				Field Temperature °C						
Instrument	Reading (mV)			Instrument Reading (mg/L)						
Model or U	Model or Unit No.:					Model or Unit No.:					



Well ID: _	529	MW-	3			Initial Depth to Water:						
Sample II	D:	Dup	licate ID: _	Dup-	2	Depth to Water after Sampling: 29.82						
	epth:			,			epth to Well					
Project a	nd Task No	D.: 1570	36150	060,0	04	Well Dia	ameter:	3 11				
Project N	ame:	MPA 0	FC M.	ne CC	A	1 Casing/Borehole Volume:						
Date:	8-21	+-17				(Circle o						
Sampled	Ву:	CM				4 Casing (Circle of	g/Borehole	Volumes: _				
Method o	f Purging:	La	v flav	sub			asing/Boreh	nole				
Method o	f Sampling	j:	w flo	w 5nb			s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, I	Remarks curbidity, and sediment		
Low	Flow Stab	ilization Cr	iteria	+/-3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		7 1 6 11		
1010		~200		35.27	4,29	8.42	1,88	279	247	Cloudy light		
1015				25.43	4,21	8.44	025	293	332	Mu Climbing		
1020				25,53	4.20	8.47	0.62	297	513	The state of the s		
1025				25,76	421	848	0,53	288	281	Mr falling		
1030				25.94	4.21	8,45	C.47	300	129			
1035		,	0,6~	26,01	4.20	8.72	0.44	302	67.1			
							100			cloudy while		
			A	1								
		26	ZIM	DE	0/	(1)	1/2	5				
		/	011	J '	(101-					
			1									
			pH CALIB	-	hoose two)			M	odel or l	Jnit No.:		
Buffer Sol				pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;										
Instrumen	t Reading											
	SPE	CIFIC ELEC	TRICAL C	ONDUCTA	NCE (SEC)	- CALIBRATIO	ON	M	odel or l	Jnit No.:		
KCI Solutio	n (μS/cm= _j	umhos/cm)			1413 at 25°C	12880 at 25°	С					
Field Temp	erature °C											
Instrument	Reading											
100	ORP/RED	OX CALIBR	ATION		DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes:			
Standard S	Solution (m			A	Iltitude / Sali				0.77.7.5			
Field Tem	perature °C				ield Temper	-						
Instrument	Reading (ı	mV)				eading (mg/L)						
Model or L	Model or Unit No.:					No.:						



			•							wueeler		
Well ID: _	APM	W-1D				Initial De	epth to Wat	er: <u>/3,</u>	801			
l			licate ID: _			Depth to	Water afte	er Sampling	9: <u>14</u> 0	32'		
Sample D	epth:	40.5	·		·	Total De	epth to Well	: <u>43.0'</u>	<u> </u>			
Project ar	nd Task No	o.: <u>6706</u> ,	150060	·		Well Dia	ımeter: <u>_ င</u> ်	, H				
			bons Creek	k		1 Casing/Borehole Volume:						
l	٠.	14, 2017				(Circle o	•					
	By: 용서		Δ.			4 Casine (Circle c	g/Borehole one)	Volumes: _				
Method o	f Purging:	_ 10W	Flow			•	ising/Boreh	ole				
Method o	f Sampling	j: <u>sub</u> n	nersible		·		s Removed					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)-	中国 益 [3]。	Remarks turbidity, and sediment)		
Low	Flow Stab	ilization Cr	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU	(
1040	40.5	₩200		25.30	6 5.85	1.83	1.17	108		Slightly cloudy in ador		
1045				25.5	1	1.85	Ø.53	116	127	(/		
1050				25.39		1.86	0.26	119	36.5	i		
1055				25.4		1.86	Ø.11	125	9.4	clear		
1100		V	%J.0	25.4	6 5.74	1.86	\$.09	128	5.3	u		
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	r ,				Warner		
			am	ole	5 /	aker	7					
		-	1	-			t					
								· · · · · · · · · · · · · · · · · · ·				
			pH CALIBI	RATION (choose two)			V	lodel or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;										
Instrument	t Reading											
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	- CALIBRATIO	ON	N	odel or	Unit No.;		
KCI Solutio	3 <u>- 41 - 2 - 5 1</u> 5 1 5 5 5 2	A. A. Sarata, Section			1413 at 25°C	12880 at 25°		<u> </u>	040,0,	Jill Ho.,		
Field Temp								<u></u>				
Instrument		·										
	27 1 24 4 2 4 4 1 1 3	OX CALIBR	PATION		DISSOLV	/ED OXYGEN (CALIBRATI	ON N	otes:			
Standard S	Solution (m	<u> </u>		<u> </u>	Altitude / Sali		CALIDITATI		Oles.			
	perature °C	··			Field Temper	<u> </u>						
	Reading (eading (mg/L)	<u> </u>					
Model or U					Model or Unit							
					J. 5111.	-						
<u> </u>							·····					



Well ID:	551	M	N-4			Initial D	enth to Wa	tor: 2	4 51	wheeler	
			licate ID: _		Depth to Water after Sampling: 38.04						
	epth:		illoate ib				epth to Wel		9	Jan	
Project a	nd Task No	.670	61500	10 0	211	Wall Die	epui to wei	7"			
		MPA /	. 4	e C							
Date:	8-24	-17	C. 1 4		1 Casing/Borehole Volume:(Circle one)						
	Ву:	1	N			4 Casin (Circle o	g/Borehole one)	Volumes:			
	f Purging: f Sampling	1: 201	Play Fb.	or orth			asing/Borel s Removed				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks turbidity, and sediment	
Low	Flow Stab	ilization Cr	iteria	+/- 3%	3% +/- 0.1	+/- 3%	+/- 10%	+/- 10%	_	4 1	
1125	1	~300	ASS	27.75	6.03	5.45	1.63	129	73	Mastly clear	
1130		0,1		27,50	604	552	080	101	16.8	very stightly	
1135				26.18	103	510	0.65	87	20.5	clearing	
140				25.82	603	5.63	0.49	20	12.1	- Corrigion	
1145				25.97	614	5.67	1.43	68	12.8	Charing	
1150		_	1.5	25.57	605	5,62	0.42	61	18.3	1	
1						2102	0,10	01	10.10		
				1		IFA					
1-	-	_	2 AMD	cd/	0	150					
1: =====	1				,	109					
					lu .						
			»U CALIB	PATION /	haara tuus						
Dff 0 - 1	i i		рп САЦБ		choose two			. N	lodel or	Unit No.:	
Buffer Sol				pH 4.0	pH 7.0	pH 10.0					
	perature °C										
Instrumen	t Reading										
Ü. 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SPE	CIFIC ELEC	CTRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATION	ON	N	lodel or	Unit No.:	
KCI Solution	on (μS/cm=	umhos/cm)			1413 at 25°C	12880 at 25°	°C				
Field Temp	erature °C										
Instrument	Reading										
	ORP/RED	OX CALIBR	RATION	DISSOLVED OXYGEN CALIBRATION				ON N	otes:	4	
Standard	Solution (m	V)		1	Altitude / Sal	inity %			M	u lawest	
Field Temperature °C					Field Temperature °C			1	1	2	
Instrument Reading (mV)					nstrument R	eading (mg/L)					
Model or U	Jnit No.:			r	Model or Uni	t No.:					



Sample ID Sample D Project ar Project Na Date:	epth: <u>*</u> nd Task No ame: <i>TM</i> <i>August</i> By: <u>B</u>	Dup 40.6' o:: <u>6706</u> 1PA - Gib 24, 2017			Total Depth to Well: 43,1' Well Diameter: 2"						
Method o	f Purging: f Sampling	1000 5 5001	tlow nersible				sing/Boreh Removed		. <u>.</u>		
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, t	Remarks urbidity, and sediment)	
Low	Flow Stab	lization Cri	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	NTU		
1149	X40.6	<i>₩250</i>		25,5	6 3.56	5.32	1.66	377		Slightly cloudy; no co	
1154	-			26.03	3,56	5,36	Ø.72	379	144	11	
1159				26.16	3,55	5.34	Ø.44	383	48.1	Clearing	
1204				26.06	3.55	5.36	\$.27	384	21.2	Clear	
1209		V		26.06	3,55	5.37	Ø.24	385	7.2	ч	
/335·	- E	QBK		2 mg		Tak 7 colle	tel				
			pH CALIBI	RATION (choose two)			М	odel or l	Jnit No.:	
Buffer Solu	ution			pH 4.0	pH 7.0	pH 10.0				}	
Field Tem	perature °C										
Instrument	t Reading	·					_				
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	– CALIBRATIC	ON	М	odel or l	Jnit No.:	
KCI Solutio	n (μS/cm≃ _l	ımhos/cm)			1413 at 25°C	12880 at 25°	С				
Field Temp	erature °C										
Instrument	Reading										
	ORP/RED	OX CALIBR	ATION		DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes:		
Standard 9	Solution (m	V)		,	Altitude / Sali	nity %		1	DUP	-3	
Field Tem	perature °C				Field Temperature °C						
Instrument	t Reading (ı	mV)			Instrument Reading (mg/L)						
Model or U	Jnit No.:				Model or Unit	No.:	,				



W-11 ID	AP /	M (H							15.4	foster wheeler	
			Uant In		_				13.00	. 7 -11	
		Dup	licate ID: _						ing:	13.76	
	epth:	D.: 670	6150	0600	204	Total De	epth to Wel				
	ame:	A .		Mine of	R		ameter:				
	8-24		Lot 1	line	<u></u> /\	1 Casing (Circle o	g/Borehole one)	Volume:	-		
Sampled	Ву:	SCM				4 Casing (Circle of	g/Borehole	Volumes	s:		
	of Purging: of Sampling	r	flow :	5W.		Total Casing/Borehole Volumes Removed:					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	on al (color, tu	Remarks irbidity, and sediment	
Low	Flow Stabi	ilization Cri	iteria	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%		1 1514 1	
1235		~20C		2453	549	4.98	1,44	83	66.1	very light yel	
1240				25.30	5.48	4,98	0.64	28	31.5	very Mild HK	
1245				25,90	5.47	4.96	0.52	88	13.1	cleaning	
1250				24,90	5,46	4.97	0,43	89	2,8	Amost contal	
1255				24.99	5,47	4.97	0.50	29	1,2	7117	
1300		V	1.5	24,93	5.47	4,95	2.48	87	0.7	crystal clear	
-/-				1		~					
		7	TIMO	led	10	13	00				
			onif	1-0		1	19				
			pH CALIBI	RATION (c	hoose two)				Model or U	oit No :	
Buffer Sol	ution			pℍ 4.0	pH 7.0	pH 10.0			model of G	III NO	
Field Tem	perature °C										
Instrumen											
111		CIFIC ELEC	TRICAL CO	ONDUCTAI	NCE (SEC)	- CALIBRATIO	ON		Model or U	nit No :	
KCI Solutio	n (μS/cm=μ				413 at 25°C	12880 at 25°			odoi oi oi	nervo	
	erature °C									4	
Instrument	Reading									1	
	ORP/REDO	OX CALIBR	ATION		DISSOLVED OXYGEN CALIBRATION			ON	Notes:		
Standard S	Solution (m\			А	Ititude / Sali				<u> </u>		
Field Tem	perature °C			F	Field Temperature °C						
Instrument	Reading (n	nV)		In	Instrument Reading (mg/L)						
	Jnit No.:				lodel or Unit	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1				

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	Well ID:	M	VW - 10	3			Initial D	enth to Wa	tor 9	. 83	wheeler		
		1	Dup				Initial Depth to Water:						
	Sample D	epth:				1		epth to Wel		y	1901		
	Project a	nd Task N	0.: 67	0615	2060	204	Well Di	ameter:	411				
	Project N	ame: 1	MPA G	M'M	3 (C)	1 Casing/Borehole Volume:							
	Date:	8-31-	-17	,			(Circle	one)	voidino				
	Sampled	Ву:	SCM				4 Casin (Circle	g/Borehole	Volumes:				
	Method o	f Purging:	Low	flor	cul			one) asing/Borel	nolo				
	Method o	f Sampling	g:	on fl	an Su	>		s Removed					
	Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)		Remarks turbidity, and sediment)		
	1325		~150		25.78	1,20	4.81	0.80	-97	1.3	Mild HC oder		
	1330				26,03	6.68	5.07	0.10	-45	3,2	1 300		
	335				25.81	6.57	5,24	0.01	-95	3,7			
7	1340				2653	654	5.22	0.10	-94	3.4			
1	1345		•	^1	26.81	6.55	5,24	4.12	-93	3.2			
3	350	•							,				
	P												
				_	1	1							
			(1	16) #	50				-		
-			70	south 1	7 (1	11-						
-						13	15						
-													
	Page 1			11.041.15							-		
	Buffer Soli	ıtion.		PH CALIB		hoose two)			N	lodel or l	Unit No.:		
ł					pH 4.0	pH 7.0	pH 10.0						
-		oerature °C	;										
-	Instrumen	-											
				TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATIO	NC	N	lodel or l	Jnit No.:		
	KCI Solution	n (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25°	С			9 B		
	Field Temp	erature °C									¥.		
	Instrument	Reading											
		ORP/RED	OX CALIBR	RATION	TELLE II	DISSOLV	ED OXYGEN	CALIBRATI	ON N	otes:			
	Standard S	Solution (m	V)		A	ltitude / Sali	nity %						
	Field Tem	oerature °C	,		F	ield Temper	ature °C						
	Instrument Reading (mV)					Instrument Reading (mg/L)							
	Model or U	Init No.:			N	lodel or Unit	No.:						
	Document1		*										



	POEI	401								wheeler			
		MW-			1	Initial Depth to Water:							
		Dup	licate ID: _	WA-		Depth to Water after Sampling: 13,96							
Sample D	Depth:	1-20	11500	10		Total Depth to Well:							
Project a	nd Task N	o.: <u>670</u>	6 1500	160	0	Well Diameter:							
	8-31	TMA	GC P	line CC		1 Casing/Borehole Volume:(Circle one)							
	Ву: _		£1	1		4 Casin (Circle	g/Borehole one)	Volumes:					
	Method of Purging:						asing/Borel		9				
Time	Time Intake Depth Rate (ml/min) Cum. Vol. (gal.) Temp. (°C) pH (units)					Specific Electrical Conductance	Dissolved Oxidat			Remarks urbidity, and sediment			
1800		~200	1	25.53	685	6-13	1.57	-12	467	Mild HE ode			
1805				25,47	130	183	1.71	ا س	16.8	Mosingeral			
1810				2507	618	\$ 54	000	45	61	clearer			
1815			150	24 94	6.14	8 80	0.00	50	4.6				
1820			-	24.95	6,12	8,96	0.00	55	2.9	Clearer			
1825			いから	29.77	6.11	9.11	0.00	56	2.1	Cicayo			
		1	- 1	1				9					
AND		7 5	Damp	ed	0	18	25						
	X	PI) up -	15	ample								
			pH CALIBI	RATION (c	hoose two)			N	Model or Ur	it No.:			
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0							
Field Tem	perature °C												
Instrumen	t Reading				5	N=							
	SPE	CIFIC ELEC	TRICAL CO	ONDUCTA	NCE (SEC)	- CALIBRATION	ON	V	lodel or Ur	nit No.:			
KCI Solutio	on (μS/cm=	μmhos/cm)			1413 at 25°C	12880 at 25°	C						
Field Temp	oerature °C							,					
Instrument	Reading												
ORP/REDOX CALIBRATION D						ED OXYGEN	CALIBRAT	ION N	lotes: 🖈	120			
Standard Solution (mV) Altit					ltitude / Sali	inity %			SONSMI	posch!			
Field Temperature °C F					Field Temperature °C					the state of			
Instrument Reading (mV) Ins					Instrument Reading (mg/L)								
Model or l	Jnit No.:			N	lodel or Uni								
Document1													

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Well ID:	MI	1 W- 15				Initial Depth to Water: 4,65								
Sample I	Sample ID: Duplicate ID:						Depth to Water after Sampling:							
Sample I	Sample Depth:						Total Depth to Well:							
		o.: 670				Well Diameter:								
Project N	lame:	MPA G	C Mil	ne C	CR	1 Casing/Borehole Volume:								
Date:	8-3	-11				(Circle	one)							
	Ву:		- 1-			4 Casir (Circle	ng/Borehole	Volumes:		78.8				
		Lon	, , ,				asing/Bore	hole						
Method o	of Sampling	g:	nw flo	aw Sn	2	Volume	es Removed	l:						
Time	Time Intake Rate (ml/min) Cum. Vol. (gal.) Temp. (°C)		pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	No.	Remarks turbidity, and sediment)						
1910		~200	M .	85.68	3.50	3.12	0.55	361	40.6	Cloudy white				
1915				2611	6 3.38	3.83	0.09	350	265	Moderale HC 00 Min clinted tan				
1934				26.0	100	3187	0.00	348	106	Clearing				
1925			0.1	25.8		3.90	0.00	344	41.1					
1750		~	2.0	25,64	3,32	3,90	0.00	341	16.1	clearer but very				
										sightly cloud				
		Samp	led	0		730								
										very slow				
								4	-	decine				
										below 16.0				
			pH CALIBR	RATION (choose two)			M	odel or l	Unit No.:				
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0				, and the second				
Field Tem	perature °C					/-								
Instrumen	t Reading													
	SPEC	CIFIC ELEC	TRICAL CO	ONDUCTA	ANCE (SEC)	CALIBRATIO	ON	M	odel or l	Unit No.:				
KCI Solutio	n (μS/cm=μ	ımhos/cm)			1413 at 25°C	12880 at 25°	С	1						
Field Temp	erature °C							1						
Instrument	Reading													
	ORP/REDO	OX CALIBR	ATION	DISSOLV	ED OXYGEN	CALIBRATI	ON NO	otes:						
0				Altitude / Salir			1	71						
L. Valzar					Field Tempera			1	, U.	Ser5al				
						eading (mg/L)			assibli	41.1				
					Model or Unit	7001791 E1101/2 OT								
								A	Non	eservative				
Document1								1 10	TOPI	Cocivalive				

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Wall ID.	SE	L MW	-7			Initial Donth to Woton 1315						
						Initial Depth to Water: 12.15						
			licate ID: _			Depth to Water after Sampling:						
Droinet a	epth:	610	6150	1010	004	Total Depth to Well: Well Diameter:						
Project M	ame:	MAGO	Min	064	P	Well Diameter: 1 Casing/Borehole Volume:						
Date:		17	1 (1)		1	(Circle		volume:				
	Ву: 鉽	M				4 Casing/Borehole Volumes:						
	f Purging:	1	Flaw	5ub		(Circle						
Method of Sampling: Low flow Sub							asing/Borel s Removed	l:				
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp. (°C)	pH (units)	Specific Electrical Conductance	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color, t	Remarks urbidity, and sediment		
1015		~150		22.69	6.26	6.75	0,75	11	28.6			
1020				23.18	630	204	0,29	1.5	240	Mild HC -		
1025				23,26		8,58	0111	35	15,2	1 10 11 - 50		
1030			1	23.29	621	8.61	0.00	30	7.3	Clearing		
1035				23,33	6:24	8.87	0,00	35	3.4			
10 40			2.0	23,36	6,24	8,99	0,00	34	2.8	Clear-		
									unc	oder still MI		
			\rightarrow	Son	pled	(a)	104	0				
Buffer Sol	ution		pH CALIB	RATION (c	pH 7.0	pH 10.0		M	lodel or l	Jnit No.:		
	perature °C			prino	pi r.o	pri 10.0						
Instrumen												
mouumen		CIEIC EL EC	CTRICAL C	ONDUCTA	NCE (SEC)	CALIDDAT	ON		lodel '	Init Nin .		
KCI Solutio	on (μS/cm=		TRICAL C		1413 at 25°C	- CALIBRATI 12880 at 25		IV	lodel or l	JHIL NO.:		
	perature °C					12000 at 20						
Instrument Reading ORP/REDOX CALIBRATION DISSO					DISSOLV	/ED OXYGEN	CALIBRAT	ION N	otes:			
				Altitude / Sali		JALIEN AT		1 1	ump suging-			
									dynolo	1		
						or Unit No.:						
								1	Call	10		



Well ID:	MNW	1-15			30	Initial D	anth to Ma	law.	En	wheeler		
		Dup	licate ID:		-	Initial Depth to Water: 5,00						
	epth:		neate ib			Depth to Water after Sampling:						
		6D	61500	60.0	104	Well Dismotory						
Project N	ame:	MPA GO	Mine	CCR	<u> </u>	1 Casing/Borehole Volume:						
	9-7-			O C A	1	(Circle		volume				
	Ву:		-(1	~ <i>b</i>		4 Casin (Circle o	g/Borehole one)	Volumes: _				
		Law	11				asing/Borel					
Method o	f Sampling	j:Law	flaw s	V D.			s Removed	:				
Time	Time Intake Depth Rate (ml/min) Cum. Vol. (gal.) Temp. (°C) pH (units)						pecific ectrical ductance Oxygen (mg/L) Oxidation (mg/L)			(color turbidity and sediment)		
1115		~200		25,38	3,53	3,73	0.50	356	295	My Climbina		
1120				26.60	3.54	386	0.01	329	403	NTU dropping		
1125				26,77	3,54	3,87	age	326	226	" ")		
1130				26.88	3.54	3.87	0.00	327	165	clearing		
1135				26,99	3,54	3.87	0.00	328	94.1			
1140				27,22		3.86	0.00	328	72,1	clearing		
1195				26.25	3,52	3.87	0.00	317	78.6	Ntu lowest		
1150				25.82	3.51	3,65	0.00	316	76.1	~75		
1155				25.67	3, 98	3.82	0,00	320	74.8	Very Slaw to		
1900		1	14.0	25.08	3.48	3.83	0,00	321	110.1	90 lower		
	1	Sar	pled	0	120	20						
			pH CALIB	RATION (c	hoose two)	fiere in		M	lodel or	Unit No.:		
Buffer Sol	ution			pH 4.0	pH 7.0	pH 10.0						
Field Tem	perature °C	;										
Instrumen	t Reading											
711-11	SPE	CIFIC ELEC	TRICAL CO	ONDUCTAI	NCE (SEC)	- CALIBRATIO	ON	M	lodel or	Unit No.:		
KCI Solution	n (μS/cm=į	μmhos/cm)		1	413 at 25°C	12880 at 25°	°C					
Field Temp	erature °C											
Instrument	Reading									3.11		
						ED OXYGEN	CALIBRATI	ION N	otes;	MI		
Standard Solution (mV)					ltitude / Sali	nity %		(limber	of after		
					ield Temper	rature °C		1	attoni	7 1-11 00		
					strument R	eading (mg/L)			110			
Model or U	Jnit No.:			M	lodel or Unit	t No.:						
Document1												

DEQBKECM/090717 taken@ 1300



Well ID: Duplicate ID: Sample ID: Duplicate ID: Project and Task No.: 6706150060, 904 Project Name: MA A GC MINE CCR Date: 7-7-17 Sampled By: Sampled By: Method of Purging: fow Sub Method of Sampling:						Initial Depth to Water:					
Time	Intake Depth	Rate (ml/min)	Cum. Vol. (gal.)	Temp.	pH (units)	Specific Electrical Conductance (AS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)	(color,	Remarks , turbidity, and sediment)	
1335 1340 1345 1350 1355	PS	rample	DH CALIB	23,33 23,40 24,70 24,85 24,95	6.37 6.41 6.44 6.46 6.47	5,10 5,16 5,23 5,23 5,23	1.51 1.13 2.79 0.71	-64 -66 -67 -66	5.0 4.8 4.4 4.5	Mild H adar	
	perature °C)	p. 1 0 1 2 1	pH 4.0	pH 7.0	pH 10.0			oder of	Officials.	
Instrument Reading SPECIFIC ELECTRICAL CONDUCTANCE (SE KCI Solution (μS/cm=μmhos/cm) 1413 at 29 Field Temperature °C Instrument Reading					NCE (SEC) 1413 at 25°C	- CALIBRATI 12880 at 25		N	odel o	r Unit No.:	
ORP/REDOX CALIBRATION Standard Solution (mV) Field Temperature °C Instrument Reading (mV)				DISSOLVED OXYGEN CALIBRATION Altitude / Salinity % Field Temperature °C Instrument Reading (mg/L) Model or Unit No.:			ION N	otes:			

Document1



APPENDIX C

Laboratory Analytical Reports

ANALYTICAL SUMMARY REPORT

August 11, 2016

Project Name:

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16060106

CCRR

Quote ID: T3094

Energy Laboratories Inc. College Station TX received the following 5 samples for Texas Municipal Power Agency on 6/21/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
T16060106-001	SSP APMW-1	06/21/16 16:20 06/21/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP pH Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16060106-003	SSP MW-2	06/21/16 13:20 06/21/16	Groundwater	Same As Above
T16060106-004	SSP MW-3	06/21/16 10:30 06/21/16	Groundwater	Same As Above
T16060106-005	SSP MW-4	06/21/16 9:10 06/21/16	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16060106

Report Date: 08/11/16

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16060106-001 Client Sample ID: SSP APMW-1

Report Date: 08/11/16 Collection Date: 06/21/16 16:20 DateReceived: 06/21/16 Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	6.8	s.u.	Н	0.1		A4500-H B	06/22/16 20:35 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	6950	mg/L		100		A2540 C	06/23/16 14:45 / pwh
MAJOR IONS		-					·
Chloride	1300	mg/L	D	20		E300.0	06/23/16 15:23 / rda
Fluoride		mg/L	Ь	0.1		A4500-F C	06/28/16 11:32 / pwh
Sulfate		mg/L	D	20		E300.0	06/23/16 15:23 / rda
Calcium		mg/L	D	2		E200.7	06/24/16 11:12 / jtr
Boron		mg/L	D	0.5		E200.7	06/24/16 11:12 / jtr
Bolon	1.1	IIIg/L	Ь	0.5		L200.7	00/24/10 11.12/ju
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:06 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 21:34 / eli-b
Barium	0.05	mg/L		0.01		E200.7	06/29/16 05:52 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	06/29/16 16:06 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 05:52 / eli-b
Chromium	ND	mg/L		0.01		E200.8	06/28/16 21:34 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	06/29/16 16:06 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 21:34 / eli-b
Lithium	1.4	mg/L	D	0.02		E200.7	06/29/16 05:52 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 05:52 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:06 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 21:34 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:04 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	2.0	pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/02/16 15:31 / jjc
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/02/16 15:31 / jjc
Total Radium as Ra226 MDC	0.18	pCi/L				E903.0	08/02/16 15:31 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16060106-003

Client Sample ID: SSP MW-2

Report Date: 08/11/16 Collection Date: 06/21/16 13:20 DateReceived: 06/21/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.4	s.u.	Н	0.1		A4500-H B	06/22/16 20:44 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	6690	mg/L		100		A2540 C	06/23/16 14:46 / pwh
MAJOR IONS							
Chloride	2070	mg/L	D	20		E300.0	06/23/16 16:02 / rda
Fluoride	0.1	mg/L		0.1		A4500-F C	06/28/16 11:57 / pwh
Sulfate	2030	mg/L	D	20		E300.0	06/23/16 16:02 / rda
Calcium	742	mg/L	D	2		E200.7	06/24/16 11:16 / jtr
Boron	0.8	mg/L	D	0.5		E200.7	06/24/16 11:16 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:32 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 21:40 / eli-b
Barium	0.4	mg/L		0.01		E200.7	06/29/16 06:20 / eli-b
Beryllium	0.009	mg/L		0.001		E200.7	06/29/16 06:20 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:20 / eli-b
Chromium	0.04	mg/L		0.01		E200.8	06/28/16 21:40 / eli-b
Cobalt	0.06	mg/L		0.02		E200.8	06/29/16 16:32 / eli-b
Lead	0.02	mg/L		0.01		E200.8	06/28/16 21:40 / eli-b
Lithium	0.9	mg/L	D	0.02		E200.7	06/29/16 06:20 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:20 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:32 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 21:40 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:14 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.7	pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	1.10	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC		pCi/L				E903.0	08/01/16 13:23 / sas
		•					

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16060106-004

Client Sample ID: SSP MW-3

Report Date: 08/11/16 Collection Date: 06/21/16 10:30 DateReceived: 06/21/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	5.0	s.u.	Н	0.1		A4500-H B	06/22/16 20:48 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	6510	mg/L		100		A2540 C	06/23/16 14:47 / pwh
MAJOR IONS							
Chloride	1560	mg/L	D	20		E300.0	06/23/16 16:21 / rda
Fluoride	0.9	mg/L		0.1		A4500-F C	06/28/16 12:05 / pwh
Sulfate	2400		D	20		E300.0	06/23/16 16:21 / rda
Calcium	647	mg/L	D	2		E200.7	06/24/16 11:18 / jtr
Boron	3.2	mg/L	D	0.5		E200.7	06/24/16 11:18 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:38 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 21:43 / eli-b
Barium	0.03	mg/L		0.01		E200.7	06/29/16 06:23 / eli-b
Beryllium	0.1	mg/L		0.001		E200.7	06/29/16 06:23 / eli-b
Cadmium	0.06	mg/L		0.01		E200.7	06/29/16 06:23 / eli-b
Chromium	ND	mg/L		0.01		E200.8	06/28/16 21:43 / eli-b
Cobalt	0.6	mg/L		0.02		E200.7	06/29/16 06:23 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 21:43 / eli-b
Lithium	0.7	mg/L	D	0.02		E200.7	06/29/16 06:23 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:23 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:38 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/29/16 16:38 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:16 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	19	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	3.8	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228	24.5	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	3.81	•				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226	5.1	pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC	0.15	pCi/L				E903.0	08/01/16 13:23 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16060106-005 Client Sample ID: SSP MW-4 **Report Date:** 08/11/16 **Collection Date:** 06/21/16 09:10 **DateReceived:** 06/21/16

Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	7.2	s.u.	Н	0.1		A4500-H B	06/22/16 20:53 / rda
·							
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	3940	mg/L		40		A2540 C	06/23/16 14:47 / pwh
MAJOR IONS							
Chloride	1120	mg/L	D	20		E300.0	06/23/16 16:41 / rda
Fluoride	0.1	mg/L		0.1		A4500-F C	06/28/16 12:09 / pwh
Sulfate	1190	mg/L	D	20		E300.0	06/23/16 16:41 / rda
Calcium	399	mg/L		1		E200.7	06/24/16 11:32 / jtr
Boron	1.3	mg/L	D	0.2		E200.7	06/24/16 11:32 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:43 / eli-b
Arsenic		mg/L		0.01		E200.8	06/28/16 21:46 / eli-b
Barium		mg/L		0.01		E200.7	06/29/16 06:27 / eli-b
Beryllium		mg/L		0.001		E200.7	06/29/16 06:27 / eli-b
Cadmium		mg/L		0.01		E200.7	06/29/16 06:27 / eli-b
Chromium		mg/L		0.01		E200.8	06/28/16 21:46 / eli-b
Cobalt		mg/L		0.02		E200.8	06/29/16 16:43 / eli-b
Lead		mg/L		0.01		E200.8	06/28/16 21:46 / eli-b
Lithium		mg/L	D	0.02		E200.7	06/29/16 06:27 / eli-b
Molybdenum		mg/L		0.05		E200.7	06/29/16 06:27 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:43 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 21:46 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:17 / eli-b
PADIONIICI IDES TOTAL		Ü					
RADIONUCLIDES - TOTAL	0.7	0://				DA 05	07/07/40 00 45 / -!:
Radium 228		pCi/L				RA-05	07/07/16 08:15 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	07/07/16 08:15 / eli-ca
Radium 228 MDC		pCi/L				RA-05	07/07/16 08:15 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/02/16 15:31 / jjc
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/02/16 15:31 / jjc
Total Radium as Ra226 MDC	0.20	pCi/L				E903.0	08/02/16 15:31 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.



Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060106

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS	S160623A
Lab ID: MB-1_160623A	Me	ethod Blank				Run: BAL3_	_160623A		06/23/	16 14:40
Solids, Total Dissolved TDS @ 186	0 C	9	mg/L	5						
Lab ID: LCS-2_160623A	La	boratory Cor	ntrol Sample			Run: BAL3_	_160623A		06/23/	16 14:40
Solids, Total Dissolved TDS @ 186	0 C	1090	mg/L	11	97	90	110			
Lab ID: T16060098-001A DUP	Sa	mple Duplica	ate			Run: BAL3_	_160623A		06/23/	16 14:40
Solids, Total Dissolved TDS @ 180	0 C	1250	mg/L	10				0.2	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060106

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www.energylab.com

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1	_160628A
Lab ID:	CCV-F2	Coi	ntinuing Cal	ibration Verif	ication Standar	rd				06/28	/16 12:40
Fluoride			1.96	mg/L	0.10	98	90	110			
Method:	A4500-F C									Batch	n: R68748
Lab ID:	LCS-F-3733	Lab	oratory Cor	ntrol Sample			Run: ATT1_	_160628A		06/28/	/16 11:20
Fluoride			5.05	mg/L	0.10	98	90	110			
Lab ID:	MBLK	Me	thod Blank				Run: ATT1_	_160628A		06/28	/16 11:27
Fluoride			0.03	mg/L	0.002						
Lab ID:	T16060106-001AMS	Sar	mple Matrix	Spike			Run: ATT1_	_160628A		06/28/	/16 11:35
Fluoride			5.08	mg/L	0.10	96	90	110			
Lab ID:	T16060106-002ADUF	S aı	mple Duplic	ate			Run: ATT1_	_160628A		06/28	/16 11:50
Fluoride			0.780	mg/L	0.10				5.0	10	

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B									Batch	n: R68678
Lab ID:	ICV1-PH12_3890	Init	ial Calibratio	n Verification	on Standard		Run: ATT1_	_160622A		06/22/	16 17:03
рН			12	s.u.	0.1	99	99	101			
Lab ID:	ICV2-PH2_3594	Init	ial Calibratio	n Verificatio	on Standard		Run: ATT1_	_160622A		06/22/	16 17:06
рН			2.1	s.u.	0.1	103	95	105			
Lab ID:	ICV/LCS-PH_3840	Lal	ooratory Con	trol Sample	e		Run: ATT1_	_160622A		06/22/	16 17:09
рН			7.0	s.u.	0.1	100	98	102			
Lab ID:	T16060108-001ADUF	P Sa	mple Duplica	ite			Run: ATT1_	_160622A		06/22/	16 17:55
pН			8.0	s.u.	0.1				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analytic	al Run:	ICP102-CS_	160624A
Lab ID:	Initial Calib Verif	2	Initial Calibration	on Verification St	tandard					06/24/	16 10:25
Boron			1.01	mg/L	0.050	101	95	105			
Calcium			48.0	mg/L	1.0	96	95	105			
Lab ID:	Cont Calib Blank	2	Continuing Cal	ibration Blank						06/24/	16 10:29
Boron			0.00796	mg/L	0.050						
Calcium			-0.00125	mg/L	1.0						
Method:	E200.7									Batch	n: R68725
Lab ID:	IPC	2	Initial Precisior	and Recovery			Run: ICP10	2-CS_160624A		06/24/	16 10:32
Boron			0.988	mg/L	0.050	99	95	105			
Calcium			47.9	mg/L	1.0	96	95	105			
Lab ID:	LCS-160624	2	Laboratory Cor	ntrol Sample			Run: ICP10	2-CS_160624A		06/24/	16 10:42
Calcium			47.8	mg/L	1.0	95	85	115			
Boron			0.989	mg/L	0.050	98	85	115			
Lab ID:	MB-160624	2	Method Blank				Run: ICP10	2-CS_160624A		06/24/	16 10:46
Calcium			0.08	mg/L	0.08						
Boron			0.006	mg/L	0.001						
Lab ID:	T16060106-004ASD	2	Serial Dilution				Run: ICP10	2-CS_160624A		06/24/	16 11:24
Calcium			696	mg/L	10		0	0	7.3	10	
Boron			3.47	mg/L	2.5		0	0	8.8	10	
Lab ID:	T16060106-004AMS	2	Sample Matrix	Spike			Run: ICP10	2-CS_160624A		06/24/	16 11:26
Calcium			1110	mg/L	2.0	93	70	130			
Boron			13.3	mg/L	0.50	101	70	130			
Lab ID:	T16060106-004AMSI	2 :	Sample Matrix	Spike Duplicate			Run: ICP10	2-CS_160624A		06/24/	16 11:29
Calcium			1120	mg/L	2.0	94	70	130	0.4	20	
Boron			13.2	mg/L	0.50	100	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7								Analytic	al Run: SUB	-B263043
Lab ID:	ICV	6 Co	ntinuing Cal	ibration Verif	ication Standaı	rd				06/28	/16 13:37
Barium			2.39	mg/L	0.10	96	95	105			
Beryllium			1.24	mg/L	0.010	99	95	105			
Cadmium			2.43	mg/L	0.010	97	95	105			
Cobalt			2.43	mg/L	0.020	97	95	105			
Lithium			1.23	mg/L	0.10	98	95	105			
Molybdenu	ım		2.43	mg/L	0.10	97	95	105			
Method:	E200.7									Batch: I	B_100369
Lab ID:	MB-100369	6 Me	thod Blank				Run: SUB-E	3263043		06/29	/16 05:44
Barium			ND	mg/L	0.0002						
Beryllium			ND	mg/L	8E-05						
Cadmium			ND	mg/L	0.0004						
Cobalt			0.005	mg/L	0.002						
Lithium			0.007	mg/L	0.002						
Molybdenu	ım		ND	mg/L	0.003						
Lab ID:	LCS-100369	6 La	boratory Cor	ntrol Sample			Run: SUB-E	3263043		06/29	/16 05:48
Barium			0.500	mg/L	0.10	100	85	115			
Beryllium			0.245	mg/L	0.010	98	85	115			
Cadmium			0.243	mg/L	0.010	97	85	115			
Cobalt			0.496	mg/L	0.050	98	85	115			
Lithium			0.506	mg/L	0.10	100	85	115			
Molybdenu	ım		0.467	mg/L	0.10	93	85	115			
Lab ID:	B16062096-001BMS3	6 Sa	mple Matrix	Spike			Run: SUB-E	3263043		06/29	/16 06:02
Barium			0.563	mg/L	0.050	103	70	130			
Beryllium			0.257	mg/L	0.0010	102	70	130			
Cadmium			0.244	mg/L	0.0036	97	70	130			
Cobalt			0.540	mg/L	0.016	100	70	130			
Lithium			1.90	mg/L	0.10	107	70	130			
Molybdenu	ım		0.495	mg/L	0.033	99	70	130			
Lab ID:	B16062096-001BMSD) 6 Sa	mple Matrix	Spike Duplic	ate		Run: SUB-E	3263043		06/29	/16 06:13
Barium			0.585	mg/L	0.050	107	70	130	3.9	20	
Beryllium			0.269	mg/L	0.0010	107	70	130	4.8	20	
Cadmium			0.260	mg/L	0.0036	104	70	130	6.6	20	
Cobalt			0.582	mg/L	0.016	108	70	130	7.6	20	
Lithium			1.96	mg/L	0.10	120	70	130	3.4	20	
Molybdenu	ım		0.518	mg/L	0.033	104	70	130	4.5	20	
Lab ID:	B16062133-001AMS3	6 Sa	mple Matrix	Spike			Run: SUB-E	3263043		06/29	/16 07:26
Barium			0.675	mg/L	0.050	104	70	130			
Beryllium			0.265	mg/L	0.0010	106	70	130			
Cadmium			0.257	mg/L	0.0010	103	70	130			
Cobalt			0.531	mg/L	0.0050	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch: E	3_100369
Lab ID:	B16062133-001AMS3	3 6 Sar	mple Matrix	Spike			Run: SUB-E	3263043		06/29/	16 07:26
Lithium			0.635	mg/L	0.10	104	70	130			
Molybdenu	m		0.493	mg/L	0.0065	99	70	130			
Lab ID:	B16062133-001AMSI	O 6 Sar	mple Matrix	Spike Duplicate			Run: SUB-E	3263043		06/29/	16 07:37
Barium			0.667	mg/L	0.050	102	70	130	1.2	20	
Beryllium			0.260	mg/L	0.0010	104	70	130	1.9	20	
Cadmium			0.249	mg/L	0.0010	100	70	130	2.8	20	
Cobalt			0.516	mg/L	0.0050	101	70	130	2.8	20	
Lithium			0.627	mg/L	0.10	103	70	130	1.3	20	
Molybdenu	m		0.494	mg/L	0.0065	99	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B263102
Lab ID:	QCS	4 Init	ial Calibratio	n Verificatio	n Standard					06/28/	/16 20:28
Arsenic			0.0508	mg/L	0.0050	102	90	110			
Chromium			0.0506	mg/L	0.010	101	90	110			
Lead			0.0499	mg/L	0.010	100	90	110			
Thallium			0.0503	mg/L	0.10	101	90	110			
Method:	E200.8									Batch: I	B_100369
Lab ID:	MB-100369	7 Me	thod Blank				Run: SUB-E	3263102		06/28/	/16 21:31
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Beryllium			ND	mg/L	9E-06						
Chromium			0.0002	mg/L	4E-05						
Lead			0.0001	mg/L	2E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-100369	7 Lat	oratory Cor	ntrol Sample			Run: SUB-E	3263102		06/28/	/16 22:49
Antimony			0.505	mg/L	0.0050	101	85	115			
Arsenic			0.493	mg/L	0.0010	99	85	115			
Beryllium			0.249	mg/L	0.0010	100	85	115			
Chromium			0.509	mg/L	0.0010	102	85	115			
Lead			0.509	mg/L	0.0010	102	85	115			
Selenium			0.430	mg/L	0.0050	86	85	115			
Thallium			0.439	mg/L	0.0010	88	85	115			
Lab ID:	B16062096-001BMS	3 7 Sa	mple Matrix	Spike			Run: SUB-E	3263102		06/28/	/16 22:52
Antimony			0.531	mg/L	0.0010	106	70	130			
Arsenic			0.524	mg/L	0.0010	104	70	130			
Beryllium			0.255	mg/L	0.0010	102	70	130			
Chromium			0.519	mg/L	0.0050	104	70	130			
Lead			0.527	mg/L	0.0010	105	70	130			
Selenium			0.526	mg/L	0.0021	105	70	130			
Thallium			0.519	mg/L	0.00050	104	70	130			
Lab ID:	B16062096-001BMSI	D 7 Sa	mple Matrix	Spike Duplic	cate		Run: SUB-E	3263102		06/28/	/16 22:55
Antimony			0.505	mg/L	0.0010	101	70	130	5.1	20	
Arsenic			0.511	mg/L	0.0010	101	70	130	2.6	20	
Beryllium			0.254	mg/L	0.0010	101	70	130	0.6	20	
Chromium			0.510	mg/L	0.0050	102	70	130	1.8	20	
Lead			0.523	mg/L	0.0010	104	70	130	0.7	20	
Selenium			0.555	mg/L	0.0021	111	70	130	5.4	20	
Thallium			0.520	mg/L	0.00050	104	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD I	RPDLimit	Qual
Method:	E200.8								Analytica	l Run: SUB	-B263148
Lab ID:	QCS	5 Init	ial Calibratio	on Verification	n Standard					06/29/	16 11:39
Antimony			0.0508	mg/L	0.050	101	90	110			
Beryllium			0.0252	mg/L	0.0010	101	90	110			
Cobalt			0.0502	mg/L	0.010	100	90	110			
Selenium			0.0512	mg/L	0.0050	102	90	110			
Thallium			0.0488	mg/L	0.10	98	90	110			
Method:	E200.8									Batch: E	3_100369
Lab ID:	MB-100369	8 Me	thod Blank				Run: SUB-E	3263148		06/29/	16 16:00
Antimony			7E-05	mg/L	4E-05						
Arsenic			7E-05	mg/L	6E-05						
Beryllium			ND	mg/L	6E-06						
Chromium			ND	mg/L	0.0002						
Cobalt			ND	mg/L	1E-05						
Lead			0.0003	mg/L	3E-05						
Selenium			ND	mg/L	0.0002						
Thallium			2E-05	mg/L	1E-05						
Lab ID:	LCS-100369	8 Lal	ooratory Cor	ntrol Sample			Run: SUB-E	3263148		06/29/	16 18:08
Antimony			0.544	mg/L	0.0050	109	85	115			
Arsenic			0.478	mg/L	0.0010	96	85	115			
Beryllium			0.279	mg/L	0.0010	112	85	115			
Chromium			0.476	mg/L	0.0010	95	85	115			
Cobalt			0.483	mg/L	0.0010	97	85	115			
Lead			0.494	mg/L	0.0010	99	85	115			
Selenium			0.470	mg/L	0.0050	94	85	115			
Thallium			0.470	mg/L	0.0010	94	85	115			
Lab ID:	B16062096-001BMS3	3 8 Sa	mple Matrix	Spike			Run: SUB-F	3263148		06/29/	16 18:13
Antimony			0.534	mg/L	0.0010	107	70	130			
Arsenic			0.501	mg/L	0.0010	99	70	130			
Beryllium			0.269	mg/L	0.0010	107	70	130			
Chromium			0.504	mg/L	0.0050	101	70	130			
Cobalt			0.504	mg/L	0.0050	100	70	130			
Lead			0.511	mg/L	0.0010	102	70	130			
Selenium			0.484	mg/L	0.0012	97	70	130			
Thallium			0.491	mg/L	0.00050	98	70	130			
Lab ID:	B16062096-001BMSI	D 8 Sa	mple Matrix	Spike Dupli	cate		Run: SUB-E	3263148		06/29/	16 18:18
Antimony			0.526	mg/L	0.0010	105	70	130	1.5	20	
Arsenic			0.502	mg/L	0.0010	100	70	130	0.2	20	
Beryllium			0.275	mg/L	0.0010	109	70	130	2.2	20	
Chromium			0.498	mg/L	0.0050	100	70	130	1.2	20	
Cobalt			0.506	mg/L	0.0050	101	70	130	0.5	20	
Lead			0.522	mg/L	0.0010	104	70	130	2.2	20	
Selenium			0.485	mg/L	0.0012	97	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Coun	nt Result	Units	RL	%REC Lo	w Limit Hi	igh Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: E	3_100369
Lab ID:	B16062096-001BMS	D 8	Sample Matrix	Spike Dupl	icate	Ru	ın: SUB-B26	3148		06/29/	16 18:18
Thallium			0.496	ma/L	0.00050	99	70	130	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit Qual
Method:	E245.1								Analytic	al Run: SUB-B263056
Lab ID:	ICV	Initi	al Calibration	on Verificat	tion Standard					06/28/16 11:45
Mercury			0.0021	mg/L	0.00010	103	90	110		
Method:	E245.1									Batch: B_100383
Lab ID:	MB-100383	Met	thod Blank				Run: SUB-E	3263056		06/28/16 11:51
Mercury			ND	mg/L	4E-06					
Lab ID:	LCS-100383	Lab	oratory Co	ntrol Samp	le		Run: SUB-E	3263056		06/28/16 11:53
Mercury			0.0022	mg/L	0.00010	109	85	115		
Lab ID:	B16062090-024BMS	Sar	nple Matrix	Spike			Run: SUB-E	3263056		06/28/16 11:59
Mercury			0.0021	mg/L	0.00010	107	70	130		
Lab ID:	B16062090-024BMS	D Sar	nple Matrix	Spike Dup	licate		Run: SUB-E	3263056		06/28/16 12:01
Mercury			0.0022	mg/L	0.00010	109	70	130	1.4	30
Lab ID:	T16060113-006B	Sar	nple Matrix	Spike			Run: SUB-E	3263056		06/28/16 12:34
Mercury			0.0021	mg/L	0.00010	103	70	130		
Lab ID:	T16060113-006B	Sar	nple Matrix	Spike Dup	licate		Run: SUB-E	3263056		06/28/16 12:36
Mercury			0.0021	mg/L	0.00010	104	70	130	0.7	30
Method:	E245.1									Batch: B_100426
Lab ID:	MB-100426	Met	thod Blank				Run: SUB-E	3263056		06/28/16 16:35
Mercury			ND	mg/L	4E-06					
Lab ID:	LCS-100426	Lab	oratory Co	ntrol Samp	le		Run: SUB-E	3263056		06/28/16 16:37
Mercury			0.0020	mg/L	0.00010	102	85	115		
Lab ID:	B16061967-001AMS	Sar	nple Matrix	Spike			Run: SUB-E	3263056		06/28/16 16:41
Mercury			0.0021	mg/L	0.00010	100	70	130		
Lab ID:	B16061967-001AMSI	D Sar	nple Matrix	Spike Dup	licate		Run: SUB-E	3263056		06/28/16 16:43
Mercury			0.0021	mg/L	0.00010	99	70	130	0.6	30

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1	_160623A
Lab ID:	ICV/LCS-W-3770	2 Ini	tial Calibratio	on Verificat	tion Standard					06/23	/16 10:44
Chloride			98.8	mg/L	2.0	99	90	110			
Sulfate			97.8	mg/L	2.0	98	90	110			
Lab ID:	ICB2	2 Ini	tial Calibratio	on Blank, Ir	nstrument Blank					06/23	/16 12:02
Chloride			0.269	mg/L	1.0		0	0			
Sulfate			ND	mg/L	1.0		0	0			
Method:	E300.0									Batch	n: R68700
Lab ID:	ICB	2 Me	ethod Blank				Run: IC1_1	60623A		06/23	/16 11:04
Chloride			0.3	mg/L	0.05						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3733	2 La	boratory For	tified Blank	(Run: IC1_1	60623A		06/23	/16 11:23
Chloride			22.8	mg/L	1.0	90	90	110			
Sulfate			23.3	mg/L	1.0	93	90	110			
Lab ID:	LFBD-3733	2 La	boratory For	tified Blank	Duplicate		Run: IC1_1	60623A		06/23	/16 11:43
Chloride			23.2	mg/L	1.0	92	90	110	1.8	10	
Sulfate			23.2	mg/L	1.0	93	90	110	0.4	10	
Lab ID:	T16060107-002AMS	2 Sa	mple Matrix	Spike			Run: IC1_1	60623A		06/23	/16 18:18
Chloride			191	mg/L	5.0	101	90	110			
Sulfate			181	mg/L	5.0	99	90	110			
Lab ID:	T16060107-002AMSI) 2 Sa	mple Matrix	Spike Dup	licate		Run: IC1_1	60623A		06/23	/16 18:38
Chloride			192	mg/L	5.0	102	90	110	0.6	10	
Sulfate			183	mg/L	5.0	101	90	110	1.4	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-0136
Lab ID:	MB-RA226-0136	3 M	ethod Blank				Run: RAD1	04-CS_160726A		08/01	/16 13:23
Total Radi	um as Ra226		0.04	pCi/L							U
Total Radi	um as Ra226 precision	(±)	0.1	pCi/L							
Total Radi	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0136	L	aboratory Cor	ntrol Sample			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		55	pCi/L		102	80	120			
Lab ID:	TapWater1MS	S	ample Matrix	Spike			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		100	pCi/L		97	70	130			
Lab ID:	TapWater1MSD	S	ample Matrix	Spike Duplicate			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		110	pCi/L		102	70	130	5.4	29.3	
Method:	E903.0									Batch: RA	226-0137
Lab ID:	MB-RA226-0137	3 M	ethod Blank				Run: RAD1	04-CS_160726B		08/02	/16 15:31
Total Radi	um as Ra226		0.007	pCi/L							U
Total Radi	um as Ra226 precision	(±)	0.02	pCi/L							
Total Radi	um as Ra226 MDC		0.03	pCi/L							
Lab ID:	LCS-RA226-0137	L	aboratory Cor	ntrol Sample			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Radium 22	26		51	pCi/L		96	80	120			
Lab ID:	TapWater1MS	S	ample Matrix	Spike			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Radium 22	26		96	pCi/L		90	70	130			
Lab ID:	TapWater1MSD	S	ample Matrix	Spike Duplicate			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Radium 22			94	pCi/L			70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060106

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: C_RA	228-5258
Lab ID:	LCS-228-RA226-8159) Lab	oratory Cor	ntrol Sample			Run: SUB-0	C213222		07/07	/16 08:15
Radium 22	28		7.4	pCi/L		102	80	120			
Lab ID:	MB-RA226-8159	3 Me	thod Blank				Run: SUB-0	C213222		07/07	/16 08:15
Radium 22	28		0.5	pCi/L							U
Radium 22	28 precision (±)		0.8	pCi/L							
Radium 22	28 MDC		1	pCi/L							
Lab ID:	C16060931-005CMS	Saı	mple Matrix	Spike			Run: SUB-0	C213222		07/07	/16 12:12
Radium 22	28		19	pCi/L		98	70	130			
Lab ID:	C16060931-005CMSE) Sar	mple Matrix	Spike Duplicate			Run: SUB-0	C213222		07/07	/16 12:12
Radium 22	28		22	pCi/L		115	70	130	14	55.1	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Workorder	Sample	Recovery	
T16060106			1
	T16060106-001C	100.53%	Ra-228
	T16060106-001C	102.52%	Ra-226
	T16060106-002C	107.64%	Ra-228
	T16060106-002C	108.74%	Ra-226
	T16060106-003C	90.05%	Ra-228
	T16060106-003C	92.43%	Ra-226
	T16060106-004C	103.73%	Ra-228
	T16060106-004C	107.38%	Ra-226
	T16060106-005C	103.30%	Ra-228
	T16060106-005C	105.51%	Ra-226

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Alisha D. Griffin

T16060106

Date Received: 6/21/2016

0 ,				
Reviewed by:	BL2000\ssuchar		Re	ceived by: trr
Reviewed Date:	6/24/2016		Car	rier name: Hand Del
Shipping container/cooler in	good condition?	Yes [√]	No 🖂	Not Present ☐
Chipping Containon/Cooler in	good containon.	100 🚺		THE THOUSE _
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🗌	Not Present ✓
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗸	No 🗌	
Chain of custody signed who	en relinquished and received?	Yes 🗸	No 🗌	
Chain of custody agrees with	h sample labels?	Yes	No 🗹	
Samples in proper container	/bottle?	Yes 🗸	No 🗌	
Sample containers intact?		Yes 🗸	No 🗌	
Sufficient sample volume for	r indicated test?	Yes 🗸	No 🗌	
All samples received within I (Exclude analyses that are c such as pH, DO, Res CI, Su	considered field parameters	Yes √	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Applicable
Container/Temp Blank temp	erature:	13.2°C On Ice - Fi	om Field	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes 🗸	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3633). Sample 004, COC and Sample Container have different collection times. Per Protocol, logging in per earliest collection time (listed on COC). Only 1-2L received for C fraction on all samples. Receipt temperature checked with IR3: read temperature = 10.3°C; corrected temperature = 13.2°C. ADG 160622 12:46

ENERGY CHain of Custody		and Analytical Request Record SE PRINT (Provide as much information as possible.)	cord possible.)	Pageof
1	Project Name, F	in .	Sample Origin	EPA/State Compliance:
Report Mail Address:	Contact Name:	S Darney Phone Fax:	Email:	oler: (Ple
				DBH/SM
Invoice Address:	Invoice Contact	Contact & Phone:	Purchase Order:	
Special Report/Formats:		ANALYSIS REQUESTED	Contact ELI prior to RUSH sample submittal	r to ubmittal
	iners olids y <u>O</u> ther ater	d=	for charges and scheduling – See	Cooler ID(s).
DW EDD/EDT (Electronic Data)	stno) 2 W / 8/slio sessoi		=	Receipt Temp
	heer of Mater gig Brion gig S think		HI	On ice: (Y) N
Other:	muM F əlqms2 7 i <u>A</u> 51999 <u>V</u> WQ	ZEE	T brishris S D D D D D D D D D D D D D D D D D D	P
SAMPLE IDENTIFICATION Collection Collection (Name, Location, Interval, etc.)	MATRIX 50		90109091 <u>T</u>	Signature Y N Match
19	Se X		×	100-
,	X -		×	Z000-005
MW-2			×	1
0 MW-3			X	F00-SM
555 mw-4 1 910	^ >	×	×	200-W
9				
8				VY
6) av
10				7
Custody, Relinemented Monthly Date/Films	Signature:	Received by (print):	Date/Time:	Signature:
Record Reinquished by (print): Date/fime:	Signature:		Date/Time:	Signature:
Signed Sample Disposal: Return to Client:	Lab Disposal:	Received by Labora and	Deterime 17	25 Monday of
In certain circumstances, samp	ergy Laboratories, Ir	oles submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to co	atories in order to complete the	ne analysis requested.
Visit our web site at <u>w</u>	ww.energylab.com f	Ints serves as notice of this possibility. All sub-contract data will be crearly notice of 1704 analysis of possibility. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.	edule, forms, and links.	

The results represented within this report relate only to the samples as submitted. This report may not be reproduced except in full. NELAP Certificate #T104704347-15-11

ANALYTICAL SUMMARY REPORT

August 11, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16060113

Quote ID: T3094

Project Name: CCRR

Energy Laboratories Inc. College Station TX received the following 7 samples for Texas Municipal Power Agency on 6/22/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Re	ceive Date	Matrix	Test
T16060113-002	AP MW-4	06/22/16 10:22 (06/22/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP pH Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16060113-003	AP MW-5	06/22/16 12:10	06/22/16	Groundwater	Same As Above
T16060113-004	AP MW-1D	06/22/16 14:40 (06/22/16	Groundwater	Same As Above
T16060113-005	AP MW-3	06/22/16 16:02 (06/22/16	Groundwater	Same As Above
T16060113-006	Dup-1	06/22/16 12:00 (06/22/16	Groundwater	Same As Above
T16060113-007	EQ-Blank-1	06/22/16 15:25 (06/22/16	Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 08/11/16

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16060113 CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR
Lab ID: T16060113-002
Client Sample ID: AP MW-4

Report Date: 08/11/16 **Collection Date:** 06/22/16 10:22 **DateReceived:** 06/22/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
7.11.11,000	resuit	Omio	Qualificis			mounou	/ undiffere Date / Dy
AGRONOMIC PROPERTIES							
рН	6.6	s.u.	Н	0.1		A4500-H B	06/23/16 17:59 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	4130	mg/L		40		A2540 C	06/23/16 15:08 / jjc
MAJOR IONS							
Chloride	485	mg/L	D	20		E300.0	06/24/16 01:06 / rda
Fluoride		mg/L	2	0.1		A4500-F C	06/28/16 12:20 / pwh
Sulfate		mg/L	D	20		E300.0	06/24/16 01:06 / rda
Calcium		mg/L		1		E200.7	06/24/16 12:18 / jtr
Boron		mg/L	D	0.2		E200.7	06/24/16 12:18 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:53 / eli-b
Arsenic		mg/L		0.01		E200.8	06/28/16 22:01 / eli-b
Barium		mg/L		0.01		E200.7	06/29/16 06:34 / eli-b
Beryllium		mg/L		0.001		E200.7	06/29/16 06:34 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:34 / eli-b
Chromium	ND	mg/L		0.01		E200.8	06/28/16 22:01 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	06/29/16 16:53 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 22:01 / eli-b
Lithium	1	mg/L		0.01		E200.7	06/29/16 06:34 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:34 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:53 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 22:01 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:21 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.4	pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228	1.98	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	1.04	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226	0.53	pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)	0.18	pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC	0.15	pCi/L				E903.0	08/01/16 13:23 / sas

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16060113-003 Client Sample ID: AP MW-5

Collection Date: 06/22/16 12:10 DateReceived: 06/22/16 Matrix: Groundwater

Report Date: 08/11/16

Analyses Result Units Qualifiers RL QCL Method Analysis Date / By	Andreas	_			ъ.	MCL/	Marth a 1	Analysis Box 15
pH 3.8 s.u. H 0.1 A4500-H B 06/23/16 18:02 / rda PHYSICAL PROPERTIES Solids, Total Dissolved TDS @ 180 C 4170 mg/L 40 A2540 C 06/23/16 15:10 / jic MAJOR IONS Chloride 410 mg/L D 20 E300.0 06/24/16 01:26 / rda Fluoride 1.5 mg/L 0.1 A4500-F C 06/24/16 10:26 / rda Sulfate 2640 mg/L D 20 E300.0 06/24/16 10:26 / rda Calcium 387 mg/L D 20 E300.0 06/24/16 10:26 / rda Calcium 387 mg/L D 20 E300.0 06/24/16 10:26 / rda Calcium 387 mg/L D 20 E300.0 06/24/16 10:26 / rda Calcium 387 mg/L D 20 E300.0 06/24/16 16:29 / rda METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 06/29/16 16:59 / ell-b Ase	Analyses	Result	Units	Qualifiers	KL	QCL	wethod	Analysis Date / By
PHYSICAL PROPERTIES Solids, Total Dissolved TDS @ 180 C	AGRONOMIC PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	рН	3.8	s.u.	Н	0.1		A4500-H B	06/23/16 18:02 / rda
MAJOR IONS Chloride 410 mg/L D 20 E300.0 06/24/16 01:26 / rda Fluoride 1.5 mg/L 0.1 A4500-F C 06/28/16 12:27 / pwh Sulfate 2640 mg/L D 20 E300.0 06/24/16 12:27 / pwh Calcium 387 mg/L 1 E200.7 06/24/16 12:20 / jtr Boron 3.3 mg/L D 0.2 E200.7 06/24/16 12:20 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 06/29/16 16:59 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Barlum 0.01 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 06:37	PHYSICAL PROPERTIES							
Chloride 410 mg/L D 20 E300.0 06/24/16 01:26 / rda Fluoride 1.5 mg/L 0.1 A4500-F C 06/28/16 12:27 / pwh Sulfate 2640 mg/L D 20 E300.0 06/24/16 12:27 / pwh Calcium 387 mg/L D 20 E300.0 06/24/16 12:20 / jtr Boron 33 mg/L D 0.2 E200.7 06/24/16 12:20 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 06/29/16 16:59 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Barium 0.01 mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Choalt 0.1 mg/L 0.01 E200.8 06/29/16 06:37 / eli-b	Solids, Total Dissolved TDS @ 180 C	4170	mg/L		40		A2540 C	06/23/16 15:10 / jjc
Fluoride	MAJOR IONS							
Sulfate 2640 mg/L D 20 E300.0 06/24/16 01:26 / rda Calcium 387 mg/L 1 E200.7 06/24/16 12:20 / jtr Boron 3.3 mg/L D 0.2 E200.7 06/24/16 12:20 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 06/29/16 16:59 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Barium 0.01 mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Beryllium 0.03 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Chobalt 0.1 mg/L 0.02 E200.8 06/28/16 16:59 / eli-b Chobalt 0.1 mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Lead ND mg/L <td>Chloride</td> <td>410</td> <td>mg/L</td> <td>D</td> <td>20</td> <td></td> <td>E300.0</td> <td>06/24/16 01:26 / rda</td>	Chloride	410	mg/L	D	20		E300.0	06/24/16 01:26 / rda
Calcium Sa7 mg/L D	Fluoride	1.5	mg/L		0.1		A4500-F C	06/28/16 12:27 / pwh
Boron 3.3 mg/L D 0.2 E200.7 06/24/16 12:20 / jtr	Sulfate	2640	mg/L	D	20		E300.0	06/24/16 01:26 / rda
METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 06/29/16 16:59 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Barium 0.01 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.001 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 06:37 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 16:59 / eli-b Lead ND mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Lead ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.05 E200.7 </td <td>Calcium</td> <td>387</td> <td>mg/L</td> <td></td> <td>1</td> <td></td> <td>E200.7</td> <td>06/24/16 12:20 / jtr</td>	Calcium	387	mg/L		1		E200.7	06/24/16 12:20 / jtr
Antimony	Boron	3.3	mg/L	D	0.2		E200.7	06/24/16 12:20 / jtr
Arsenic 0.02 mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Barium 0.01 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.001 E200.7 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.001 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/28/16 12:204 / eli-b Cobalt 0.1 mg/L 0.01 E200.8 06/28/16 12:204 / eli-b Lithium 0.5 mg/L 0.01 E200.8 06/28/16 12:204 / eli-b Lithium 0.5 mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Lithium 0.5 mg/L 0.01 E200.8 06/28/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Thallium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b METALS, TOTAL ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 PRAdium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 precision (±) 1.6 pCi/L RA-05 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.6 pCi/L RA-05 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.6 pCi/L RA-05 08/11/16 00:00 / jleb Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	METALS, TOTAL RECOVERABLE							
Barium 0.01 mg/L 0.01 mg/L E200.7 06/29/16 06:37 / eli-b Beryllium 0.08 mg/L 0.001 E200.7 06/29/16 06:37 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 16:59 / eli-b Lead ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Lithium 0.5 mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Molybdenum ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b METALS, TOTAL Mercury ND mg/L 0.01 E200.8 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 prec	Antimony	ND	mg/L		0.05		E200.8	06/29/16 16:59 / eli-b
Beryllium	Arsenic	0.02	mg/L		0.01		E200.8	06/28/16 22:04 / eli-b
Cadmium ND mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Chromium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 16:59 / eli-b Lead ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Lithium 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Selenium ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b METALS, TOTAL ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b METALS, TOTAL METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca <td>Barium</td> <td>0.01</td> <td>mg/L</td> <td></td> <td>0.01</td> <td></td> <td>E200.7</td> <td>06/29/16 06:37 / eli-b</td>	Barium	0.01	mg/L		0.01		E200.7	06/29/16 06:37 / eli-b
Chromium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 16:59 / eli-b Lead ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Lithium 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Thallium ND mg/L 0.01 E200.8 06/29/16 06:37 / eli-b Thallium ND mg/L 0.01 E200.8 06/29/16 06:37 / eli-b METALS, TOTAL METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12	Beryllium	0.08	mg/L		0.001		E200.7	06/29/16 06:37 / eli-b
Cobalt 0.1 mg/L 0.02 E200.8 06/29/16 16:59 / eli-b Lead ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Lithium 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b METALS, TOTAL Mercury ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L 0.001 E245.1 06/28/16 12:27 / eli-b Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 precision (±) 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb	Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:37 / eli-b
Lead ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Lithium 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/28/16 12:20 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Chromium	ND	mg/L		0.01		E200.8	06/28/16 22:04 / eli-b
Lithium 0.5 mg/L 0.01 E200.7 06/29/16 06:37 / eli-b Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Cobalt	0.1	mg/L		0.02		E200.8	06/29/16 16:59 / eli-b
Molybdenum ND mg/L 0.05 E200.7 06/29/16 06:37 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Lead	ND	mg/L		0.01		E200.8	06/28/16 22:04 / eli-b
Selenium ND mg/L 0.01 E200.8 06/29/16 16:59 / eli-b Thallium ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Lithium	0.5	mg/L		0.01		E200.7	06/29/16 06:37 / eli-b
METALS, TOTAL ND mg/L 0.01 E200.8 06/28/16 22:04 / eli-b Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:37 / eli-b
METALS, TOTAL Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Selenium	ND	mg/L		0.01		E200.8	06/29/16 16:59 / eli-b
Mercury ND mg/L 0.001 E245.1 06/28/16 12:27 / eli-b RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Thallium	ND	mg/L		0.01		E200.8	06/28/16 22:04 / eli-b
RADIONUCLIDES - TOTAL Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	METALS, TOTAL							
Radium 228 2.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/01/16 10:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:27 / eli-b
Radium 228 precision (±) 1.6 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	RADIONUCLIDES - TOTAL							
Radium 228 MDC 1.7 pCi/L RA-05 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Radium 228	2.6	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Radium 228 precision (±)	1.6	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228 4.55 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.60 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas		1.7	•				RA-05	07/07/16 12:12 / eli-ca
Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Radium 226 + Radium 228	4.55	•				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas	Radium 226 + Radium 228 precision (±)	1.60	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 13:23 / sas			•				E903.0	•
	Total Radium as Ra226 precision (±)						E903.0	08/01/16 13:23 / sas
			•				E903.0	08/01/16 13:23 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16060113-004

Client Sample ID: AP MW-1D

Report Date: 08/11/16 Collection Date: 06/22/16 14:40 DateReceived: 06/22/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	06/23/16 18:07 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	1490	mg/L		20		A2540 C	06/23/16 15:10 / jjc
MAJOR IONS							
Chloride		mg/L	D	10		E300.0	06/24/16 01:45 / rda
Fluoride		mg/L		0.1		A4500-F C	06/28/16 12:32 / pwh
Sulfate	664	mg/L	D	10		E300.0	06/24/16 01:45 / rda
Calcium	88	mg/L		1		E200.7	06/24/16 12:23 / jtr
Boron	4.9	mg/L	D	0.1		E200.7	06/24/16 12:23 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	06/29/16 17:04 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 22:07 / eli-b
Barium	0.02	mg/L		0.01		E200.7	06/29/16 06:41 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	06/29/16 06:41 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:41 / eli-b
Chromium	ND	mg/L		0.01		E200.8	06/28/16 22:07 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	06/29/16 17:04 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 22:07 / eli-b
Lithium	0.07	mg/L		0.01		E200.7	06/29/16 06:41 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:41 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 17:04 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 22:07 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:29 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.6	pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)	0.19	pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC		pCi/L				E903.0	08/01/16 13:23 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

CCRR Project: Lab ID: T16060113-005

Client Sample ID: AP MW-3

Report Date: 08/11/16 Collection Date: 06/22/16 16:02 DateReceived: 06/22/16 Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	6.3	s.u.	Н	0.1		A4500-H B	06/23/16 18:11 / rda
·							
PHYSICAL PROPERTIES Solids, Total Dissolved TDS @ 180 C	1300	mg/L		10		A2540 C	06/23/16 15:11 / jjc
Solids, Total Dissolved TDS @ Too C	1390	IIIg/L		10		A2340 C	00/23/10 13.11/ jjc
MAJOR IONS							
Chloride		mg/L	D	10		E300.0	06/24/16 02:05 / rda
Fluoride		mg/L		0.1		A4500-F C	06/28/16 12:37 / pwh
Sulfate		mg/L	D	10		E300.0	06/24/16 02:05 / rda
Calcium		mg/L		1		E200.7	06/24/16 12:27 / jtr
Boron	3.7	mg/L	D	0.1		E200.7	06/24/16 12:27 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	06/29/16 06:44 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 22:10 / eli-b
Barium		mg/L		0.01		E200.7	06/29/16 06:44 / eli-b
Beryllium	0.002	mg/L		0.001		E200.7	06/29/16 06:44 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:44 / eli-b
Chromium	ND	mg/L		0.01		E200.7	06/29/16 06:44 / eli-b
Cobalt	0.05	mg/L		0.02		E200.8	06/29/16 17:09 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 22:10 / eli-b
Lithium		mg/L		0.01		E200.7	06/29/16 06:44 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:44 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 17:09 / eli-b
Thallium		mg/L		0.01		E200.8	06/28/16 22:10 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:31 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	0.47	pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)		pCi/L	U			RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
		•					•
Radium 226 + Radium 228 precision (±) Total Radium as Ra226		pCi/L				A7500-RA	08/11/16 00:00 / jleb
		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC	0.16	pCi/L				E903.0	08/01/16 13:23 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16060113-006

Client Sample ID: Dup-1

Report Date: 08/11/16 **Collection Date:** 06/22/16 12:00

DateReceived: 06/22/16 **Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	06/23/16 18:15 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	1460	mg/L		20		A2540 C	06/23/16 15:11 / jjc
MAJOR IONS							
Chloride	218	mg/L	D	10		E300.0	06/24/16 13:43 / rda
Fluoride		mg/L		0.1		A4500-F C	06/28/16 12:44 / pwh
Sulfate		mg/L	D	10		E300.0	06/24/16 13:43 / rda
Calcium		mg/L		1		E200.7	06/24/16 12:40 / jtr
Boron	4.8	mg/L	D	0.1		E200.7	06/24/16 12:40 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	06/29/16 06:55 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	06/28/16 22:13 / eli-b
Barium	0.02	mg/L		0.01		E200.7	06/29/16 06:55 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	06/29/16 06:55 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	06/29/16 06:55 / eli-b
Chromium	ND	mg/L		0.01		E200.7	06/29/16 06:55 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	06/29/16 17:14 / eli-b
Lead	ND	mg/L		0.01		E200.8	06/28/16 22:13 / eli-b
Lithium	0.05	mg/L		0.01		E200.7	06/29/16 06:55 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	06/29/16 06:55 / eli-b
Selenium	ND	mg/L		0.01		E200.8	06/29/16 17:14 / eli-b
Thallium	ND	mg/L		0.01		E200.8	06/28/16 22:13 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	06/28/16 12:33 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	2.9	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	07/07/16 12:12 / eli-ca
Radium 226 + Radium 228	3.40	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/01/16 13:23 / sas
Total Radium as Ra226 MDC		pCi/L				E903.0	08/01/16 13:23 / sas
		-					

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR T16060113-007 Lab ID: Client Sample ID: EQ-Blank-1

Report Date: 08/11/16 Collection Date: 06/22/16 15:25 DateReceived: 06/22/16

Matrix: Water

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **AGRONOMIC PROPERTIES** Hq 5.7 s.u. Н 0.1 A4500-H B 06/23/16 18:20 / rda **PHYSICAL PROPERTIES** Solids, Total Dissolved TDS @ 180 C 10 A2540 C 06/24/16 14:46 / adg ND mg/L **MAJOR IONS** Chloride ND mg/L 1 E300.0 06/24/16 14:21 / rda Fluoride ND mg/L 0.1 A4500-F C 06/28/16 12:56 / pwh Sulfate mg/L E300.0 06/24/16 14:21 / rda ND 1 Calcium ND mg/L 1 E200.7 06/24/16 12:48 / jtr 0.05 E200.7 06/24/16 12:48 / jtr Boron ND mg/L **METALS, TOTAL RECOVERABLE** 0.05 E200.7 06/29/16 06:59 / eli-b Antimony ND mg/L E200.8 06/28/16 22:16 / eli-b Arsenic ND mg/L 0.01 Barium ND mg/L 0.01 E200.7 06/29/16 06:59 / eli-b Beryllium ND mg/L 0.001 E200.7 06/29/16 06:59 / eli-b Cadmium ND mg/L 0.01 E200.7 06/29/16 06:59 / eli-b Chromium ND mg/L 0.01 E200.8 06/28/16 22:16 / eli-b Cobalt 0.02 E200.8 06/29/16 17:36 / eli-b ND mg/L 0.01 F2008 I ead ND mg/L 06/28/16 22·16 / eli-b Lithium 0.01 mg/L 0.01E200.7 06/29/16 06:59 / eli-b Molybdenum mg/L 0.05 E200.7 06/29/16 06:59 / eli-b Selenium ND mg/L 0.01 E200.8 06/29/16 17:36 / eli-b F200 8 **Thallium** ND mg/L 0.01 06/28/16 22:16 / eli-b **METALS, TOTAL** Mercury ND mg/L 0.001 E245.1 06/28/16 12:38 / eli-b **RADIONUCLIDES - TOTAL** Radium 228 2.1 pCi/L **RA-05** 07/07/16 12:12 / eli-ca **RA-05** Radium 228 precision (±) 1.4 pCi/L 07/07/16 12:12 / eli-ca Radium 228 MDC 2.0 pCi/L **RA-05** 07/07/16 12:12 / eli-ca Radium 226 + Radium 228 2.36 pCi/L A7500-RA 08/11/16 00:00 / ileb Radium 226 + Radium 228 precision (±) 1.38 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.26 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 precision (±) 0.15 pCi/L E903.0 08/01/16 13:23 / sas Total Radium as Ra226 MDC 0.16 pCi/L E903.0 08/01/16 13:23 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS	3160623B
Lab ID: MB-1_160623B	Me	ethod Blank				Run: BAL3_	_160623E		06/23/	16 15:06
Solids, Total Dissolved TDS @ 1	80 C	ND	mg/L	5						
Lab ID: LCS-2_160623B	La	boratory Con	ntrol Sample	e		Run: BAL3_	_160623E		06/23/	16 15:06
Solids, Total Dissolved TDS @ 1	80 C	1000	mg/L	10	100	90	110			
Lab ID: T16060113-004A DU	I P Sa	mple Duplica	ate			Run: BAL3_	_160623E		06/23/	16 15:10
Solids, Total Dissolved TDS @ 1	80 C	1470	mg/L	20				1.1	5	
Method: A2540 C									Batch: TDS	3160624A
Lab ID: MB-1_160624A	Me	ethod Blank				Run: BAL3_	_160624A		06/24/	16 14:44
Solids, Total Dissolved TDS @ 1	80 C	ND	mg/L	5						
Lab ID: LCS-2_160624A	La	boratory Con	ntrol Sample	e		Run: BAL3_	_160624A		06/24/	16 14:45
Solids, Total Dissolved TDS @ 1	80 C	983	mg/L	10	98	90	110			
Lab ID: T16060097-005A DU	I P Sa	mple Duplica	ate			Run: BAL3_	_160624A		06/24/	16 14:46
Solids, Total Dissolved TDS @ 1	80 C	2670	mg/L	20				1.0	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1	_160628A
Lab ID:	CCV-F2	Coi	ntinuing Cal	ibration Verif	cation Standar	rd				06/28	/16 12:40
Fluoride			1.96	mg/L	0.10	98	90	110			
Method:	A4500-F C									Batch	n: R68748
Lab ID:	LCS-F-3733	Lab	oratory Cor	ntrol Sample			Run: ATT1	_160628A		06/28/	/16 11:20
Fluoride			5.05	mg/L	0.10	98	90	110			
Lab ID:	MBLK	Me	thod Blank				Run: ATT1	_160628A		06/28	/16 11:27
Fluoride			0.03	mg/L	0.002						
Lab ID:	T16060106-001AMS	Sar	mple Matrix	Spike			Run: ATT1	_160628A		06/28/	/16 11:35
Fluoride			5.08	mg/L	0.10	96	90	110			
Lab ID:	T16060113-006ADUF	S aı	mple Duplic	ate			Run: ATT1	_160628A		06/28	/16 12:49
Fluoride			0.560	mg/L	0.10				0.0	10	

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B								Analytica	l Run: ATT1_	_160623A
Lab ID:	ICV/LCS-PH-3840	Initia	al Calibratio	n Verificat	ion Standard					06/23/	16 14:49
рН			7.0	s.u.	0.1	100	98	102			
Method:	A4500-H B									Batch	n: R68708
Lab ID:	ICV1-PH12_3890	Initia	al Calibratio	n Verificat	ion Standard		Run: ATT1	_160623A		06/23/	16 14:33
рН			12	s.u.	0.1	99	99	101			
Lab ID:	ICV2-PH2_3594	Initia	al Calibratio	n Verificat	ion Standard		Run: ATT1	_160623A		06/23/	16 14:45
pН			2.1	s.u.	0.1	104	95	105			
Lab ID:	T16060113-001ADUF	P Sam	ple Duplica	ite			Run: ATT1	_160623A		06/23/	16 17:54
рН			4.6	s.u.	0.1				1.1	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analytic	al Run:	ICP102-CS_	160624A
Lab ID:	Initial Calib Verif	2	nitial Calibration	on Verification St	andard					06/24/	16 10:25
Boron			1.01	mg/L	0.050	101	95	105			
Calcium			48.0	mg/L	1.0	96	95	105			
Lab ID:	Cont Calib Blank	2 (Continuing Cal	ibration Blank						06/24/	16 10:29
Boron			0.00796	mg/L	0.050						
Calcium			-0.00125	mg/L	1.0						
Method:	E200.7									Batch	n: R68725
Lab ID:	IPC	2	nitial Precisior	and Recovery			Run: ICP10	2-CS_160624A		06/24/	16 10:32
Boron			0.988	mg/L	0.050	99	95	105			
Calcium			47.9	mg/L	1.0	96	95	105			
Lab ID:	LCS-160624	2 L	_aboratory Cor	ntrol Sample			Run: ICP10	2-CS_160624A		06/24/	16 10:42
Calcium			47.8	mg/L	1.0	95	85	115			
Boron			0.989	mg/L	0.050	98	85	115			
Lab ID:	MB-160624	2 1	Method Blank				Run: ICP10	02-CS_160624A		06/24/	16 10:46
Calcium			0.08	mg/L	0.08						
Boron			0.006	mg/L	0.001						
Lab ID:	T16060113-005ASD	2 8	Serial Dilution				Run: ICP10	02-CS_160624A		06/24/	16 12:30
Calcium			145	mg/L	2.0		0	0	4.9	10	
Boron			3.64	mg/L	0.50		0	0	1.8	10	
Lab ID:	T16060113-005AMS	2 8	Sample Matrix	Spike			Run: ICP10	02-CS_160624A		06/24/	16 12:32
Calcium			224	mg/L	1.0	87	70	130			
Boron			5.61	mg/L	0.10	95	70	130			
Lab ID:	T16060113-005AMSI	2 9	Sample Matrix	Spike Duplicate			Run: ICP10	02-CS_160624A		06/24/	16 12:36
Calcium			228	mg/L	1.0	91	70	130	1.7	20	
Boron			5.67	mg/L	0.10	98	70	130	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLin	nit (Qual
Method:	E200.7								Analytical Run: S	SUB-B	263043
Lab ID:	ICV	7 Co	ntinuing Cal	ibration Verific	ation Standa	rd			06	3/28/16	6 13:37
Antimony			2.43	mg/L	0.050	97	95	105			
Barium			2.39	mg/L	0.10	96	95	105			
Beryllium			1.24	mg/L	0.010	99	95	105			
Cadmium			2.43	mg/L	0.010	97	95	105			
Chromium			2.40	mg/L	0.050	96	95	105			
Lithium			1.23	mg/L	0.10	98	95	105			
Molybdenu	ım		2.43	mg/L	0.10	97	95	105			
Method:	E200.7								Bat	ch: B_	100369
Lab ID:	MB-100369	7 Me	thod Blank				Run: SUB-E	3263043	06	3/29/16	6 05:44
Antimony			ND	mg/L	0.01						
Barium			ND	mg/L	0.0002						
Beryllium			ND	mg/L	8E-05						
Cadmium			ND	mg/L	0.0004						
Chromium			ND	mg/L	0.003						
Lithium			0.007	mg/L	0.002						
Molybdenu	ım		ND	mg/L	0.003						
Lab ID:	LCS-100369	7 Lab	oratory Co	ntrol Sample			Run: SUB-E	3263043	06	3/29/16	6 05:48
Antimony			0.495	mg/L	0.10	99	85	115			
Barium			0.500	mg/L	0.10	100	85	115			
Beryllium			0.245	mg/L	0.010	98	85	115			
Cadmium			0.243	mg/L	0.010	97	85	115			
Chromium			0.490	mg/L	0.050	98	85	115			
Lithium			0.506	mg/L	0.10	100	85	115			
Molybdenu	ım		0.467	mg/L	0.10	93	85	115			
Lab ID:	B16062096-001BMS3	3 7 Sai	mple Matrix	Spike			Run: SUB-E	3263043	06	3/29/16	6 06:02
Antimony			0.477	mg/L	0.13	95	70	130			
Barium			0.563	mg/L	0.050	103	70	130			
Beryllium			0.257	mg/L	0.0010	102	70	130			
Cadmium			0.244	mg/L	0.0036	97	70	130			
Chromium			0.470	mg/L	0.032	94	70	130			
Lithium			1.90	mg/L	0.10	107	70	130			
Molybdenu	ım		0.495	mg/L	0.033	99	70	130			
Lab ID:	B16062096-001BMSE	7 Sai	mple Matrix	Spike Duplica	te		Run: SUB-E	3263043	06	3/29/16	6 06:13
Antimony			0.388	mg/L	0.13	78	70	130	21 2	20	R
Barium			0.585	mg/L	0.050	107	70	130	3.9	20	
Beryllium			0.269	mg/L	0.0010	107	70	130	4.8	20	
Cadmium			0.260	mg/L	0.0036	104	70	130	6.6	20	
Chromium			0.491	mg/L	0.032	98	70	130	4.4	20	
Lithium			1.96	mg/L	0.10	120	70	130	3.4	20	
Molybdenu	ım		0.518	mg/L	0.033	104	70	130	4.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch: E	3_100369
Lab ID:	B16062133-001AMS3	3 7 Sai	mple Matrix	Spike			Run: SUB-E	3263043		06/29/	16 07:26
Antimony			0.464	mg/L	0.025	93	70	130			
Barium			0.675	mg/L	0.050	104	70	130			
Beryllium			0.265	mg/L	0.0010	106	70	130			
Cadmium			0.257	mg/L	0.0010	103	70	130			
Chromium			0.507	mg/L	0.0064	101	70	130			
Lithium			0.635	mg/L	0.10	104	70	130			
Molybdenu	ım		0.493	mg/L	0.0065	99	70	130			
Lab ID:	B16062133-001AMSI	7 Sai	mple Matrix	Spike Duplicate			Run: SUB-E	3263043		06/29/	16 07:37
Antimony			0.476	mg/L	0.025	95	70	130	2.5	20	
Barium			0.667	mg/L	0.050	102	70	130	1.2	20	
Beryllium			0.260	mg/L	0.0010	104	70	130	1.9	20	
Cadmium			0.249	mg/L	0.0010	100	70	130	2.8	20	
Chromium			0.498	mg/L	0.0064	100	70	130	1.9	20	
Lithium			0.627	mg/L	0.10	103	70	130	1.3	20	
Molybdenu	ım		0.494	mg/L	0.0065	99	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytica	l Run: SUB	-B263102
Lab ID:	QCS	4 Init	ial Calibratio	on Verificatio	on Standard					06/28/	16 20:28
Arsenic			0.0508	mg/L	0.0050	102	90	110			
Chromium			0.0506	mg/L	0.010	101	90	110			
Lead			0.0499	mg/L	0.010	100	90	110			
Thallium			0.0503	mg/L	0.10	101	90	110			
Method:	E200.8									Batch: I	3_100369
Lab ID:	MB-100369	6 Me	thod Blank				Run: SUB-	3263102		06/28/	16 21:31
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Chromium			0.0002	mg/L	4E-05						
Lead			0.0001	mg/L	2E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-100369	6 Lal	ooratory Co	ntrol Sample	:		Run: SUB-l	3263102		06/28/	16 22:49
Antimony			0.505	mg/L	0.0050	101	85	115			
Arsenic			0.493	mg/L	0.0010	99	85	115			
Chromium			0.509	mg/L	0.0010	102	85	115			
Lead			0.509	mg/L	0.0010	102	85	115			
Selenium			0.430	mg/L	0.0050	86	85	115			
Thallium			0.439	mg/L	0.0010	88	85	115			
Lab ID:	B16062096-001BMS	3 6 Sa	mple Matrix	Spike			Run: SUB-l	3263102		06/28/	16 22:52
Antimony			0.531	mg/L	0.0010	106	70	130			
Arsenic			0.524	mg/L	0.0010	104	70	130			
Chromium			0.519	mg/L	0.0050	104	70	130			
Lead			0.527	mg/L	0.0010	105	70	130			
Selenium			0.526	mg/L	0.0021	105	70	130			
Thallium			0.519	mg/L	0.00050	104	70	130			
Lab ID:	B16062096-001BMSI	D 6 Sa	mple Matrix	Spike Dupli	cate		Run: SUB-I	3263102		06/28/	16 22:55
Antimony			0.505	mg/L	0.0010	101	70	130	5.1	20	
Arsenic			0.511	mg/L	0.0010	101	70	130	2.6	20	
Chromium			0.510	mg/L	0.0050	102	70	130	1.8	20	
Lead			0.523	mg/L	0.0010	104	70	130	0.7	20	
Selenium			0.555	mg/L	0.0021	111	70	130	5.4	20	
Thallium			0.520	mg/L	0.00050	104	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Project.	JOININ							4401	ik Order. 110000	J110
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLim	nit Qual
Method:	E200.8								Analytical Run: S	UB-B263148
Lab ID:	QCS	3 Init	ial Calibration	on Verificati	on Standard				06	/29/16 11:39
Antimony			0.0508	mg/L	0.050	101	90	110		
Cobalt			0.0502	mg/L	0.010	100	90	110		
Selenium			0.0512	mg/L	0.0050	102	90	110		
Method:	E200.8								Bato	h: B_100369
Lab ID:	MB-100369	7 Me	thod Blank				Run: SUB-l	3263148	06	/29/16 16:00
Antimony			7E-05	mg/L	4E-05					
Arsenic			7E-05	mg/L	6E-05					
Chromium			ND	mg/L	0.0002					
Cobalt			ND	mg/L	1E-05					
Lead			0.0003	mg/L	3E-05					
Selenium			ND	mg/L	0.0002					
Thallium			2E-05	mg/L	1E-05					
Lab ID:	LCS-100369	7 Lal	ooratory Co	ntrol Sampl	e		Run: SUB-l	3263148	06	/29/16 18:08
Antimony			0.544	mg/L	0.0050	109	85	115		
Arsenic			0.478	mg/L	0.0010	96	85	115		
Chromium			0.476	mg/L	0.0010	95	85	115		
Cobalt			0.483	mg/L	0.0010	97	85	115		
Lead			0.494	mg/L	0.0010	99	85	115		
Selenium			0.470	mg/L	0.0050	94	85	115		
Thallium			0.470	mg/L	0.0010	94	85	115		
Lab ID:	B16062096-001BMS	3 7 Sai	mple Matrix	Spike			Run: SUB-l	3263148	06	/29/16 18:13
Antimony			0.534	mg/L	0.0010	107	70	130		
Arsenic			0.501	mg/L	0.0010	99	70	130		
Chromium			0.504	mg/L	0.0050	101	70	130		
Cobalt			0.504	mg/L	0.0050	100	70	130		
Lead			0.511	mg/L	0.0010	102	70	130		
Selenium			0.484	mg/L	0.0012	97	70	130		
Thallium			0.491	mg/L	0.00050	98	70	130		
Lab ID:	B16062096-001BMS	D 7 Sa	mple Matrix	Spike Dupl	icate		Run: SUB-l	3263148	06	/29/16 18:18
Antimony			0.526	mg/L	0.0010	105	70	130	1.5 2	.0
Arsenic			0.502	mg/L	0.0010	100	70	130	0.2 2	.0
Chromium			0.498	mg/L	0.0050	100	70	130	1.2 2	
Cobalt			0.506	mg/L	0.0050	101	70	130	0.5 2	
Lead			0.522	mg/L	0.0010	104	70	130	2.2 2	
Selenium			0.485	mg/L	0.0012	97	70	130	0.1 2	
Thallium			0.496	mg/L	0.00050	99	70	130		.0
				J						

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count Resu	lt Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run: SUB	-B263056
Lab ID:	ICV	Initial Calib	ration Verificat	ion Standard					06/28/	16 11:45
Mercury		0.002	21 mg/L	0.00010	103	90	110			
Method:	E245.1								Batch: I	3_100383
Lab ID:	MB-100383	Method Bla	ank			Run: SUB-l	B263056		06/28/	16 11:51
Mercury		N	D mg/L	4E-06						
Lab ID:	LCS-100383	Laboratory	Control Sampl	е		Run: SUB-l	B263056		06/28/	16 11:53
Mercury		0.002	22 mg/L	0.00010	109	85	115			
Lab ID:	B16062090-024BMS	Sample Ma	atrix Spike			Run: SUB-I	B263056		06/28/	16 11:59
Mercury		0.002	21 mg/L	0.00010	107	70	130			
Lab ID:	B16062090-024BMSI	D Sample Ma	atrix Spike Dup	licate		Run: SUB-	B263056		06/28/	16 12:01
Mercury		0.002	22 mg/L	0.00010	109	70	130	1.4	30	
Lab ID:	T16060113-006B	Sample Ma	atrix Spike			Run: SUB-	B263056		06/28/	16 12:34
Mercury		0.002	21 mg/L	0.00010	103	70	130			
Lab ID:	T16060113-006B	Sample Ma	atrix Spike Dup	licate		Run: SUB-l	B263056		06/28/	16 12:36
Mercury		0.002	21 mg/L	0.00010	104	70	130	0.7	30	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060113

Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1	_160623A
Lab ID:	ICV/LCS-W-3770	2	Initial Calibrati	on Verification	n Standard					06/23	/16 10:44
Chloride			98.8	mg/L	2.0	99	90	110			
Sulfate			97.8	mg/L	2.0	98	90	110			
Lab ID:	ICB2	2	Initial Calibrati	on Blank, Inst	rument Blank					06/23	/16 12:02
Chloride			0.269	mg/L	1.0		0	0			
Sulfate			ND	mg/L	1.0		0	0			
Method:	E300.0									Batc	h: R68700
Lab ID:	ICB	2	Method Blank				Run: IC1_1	60623A		06/23	/16 11:04
Chloride			0.3	mg/L	0.05		_				
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3733	2	Laboratory Fo	rtified Blank			Run: IC1_1	60623A		06/23	/16 11:23
Chloride			22.8	mg/L	1.0	90	90	110			
Sulfate			23.3	mg/L	1.0	93	90	110			
Lab ID:	LFBD-3733	2	Laboratory Fo	rtified Blank D	uplicate		Run: IC1_1	60623A		06/23	/16 11:43
Chloride			23.2	mg/L	1.0	92	90	110	1.8	10	
Sulfate			23.2	mg/L	1.0	93	90	110	0.4	10	
Lab ID:	T16060109-004AMS	2	Sample Matrix	Spike			Run: IC1_1	60623A		06/23	/16 22:50
Chloride			511	mg/L	10	109	90	110			
Sulfate			1640	mg/L	10		90	110			AE
- Low spik	e recovery due to matrix int	erferend	ce								
Lab ID:	T16060109-004AMSI	D 2	Sample Matrix	Spike Duplica	ate		Run: IC1_1	60623A		06/23	/16 23:10
Chloride			492	mg/L	10	102	90	110	3.6	10	
Sulfate			1580	mg/L	10		90	110	3.6	10	AE
- Low spik	e recovery due to matrix int	erferend	ce								

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	al Run: IC1	_160624A
Lab ID:	ICV/LCS-W-3770	2 Init	ial Calibratio	on Verification S	Standard					06/24	/16 10:44
Chloride			96.9	mg/L	2.0	97	90	110			
Sulfate			95.5	mg/L	2.0	96	90	110			
Method:	E300.0									Batch	n: R68710
Lab ID:	ICB	2 Me	thod Blank				Run: IC1_1	60624A		06/24	/16 11:03
Chloride			0.3	mg/L	0.05						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3733	2 Lal	boratory For	tified Blank			Run: IC1_1	60624A		06/24	/16 11:22
Chloride			23.1	mg/L	1.0	91	90	110			
Sulfate			23.2	mg/L	1.0	93	90	110			
Lab ID:	T16060118-001AMS	2 Sa	mple Matrix	Spike			Run: IC1_1	60624A		06/24	/16 12:01
Chloride			1610	mg/L	50	97	90	110			
Sulfate			4300	mg/L	50	91	90	110			
Lab ID:	T16060118-001AMSE	2 Sa	mple Matrix	Spike Duplicate	Э		Run: IC1_1	60624A		06/24	/16 12:21
Chloride			1610	mg/L	50	97	90	110	0.0	10	
Sulfate			4290	mg/L	50	90	90	110	0.3	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-0136
Lab ID:	MB-RA226-0136	3 M	lethod Blank				Run: RAD1	04-CS_160726A		08/01	/16 13:23
Total Radi	um as Ra226		0.04	pCi/L							U
Total Radi	ium as Ra226 precision	(±)	0.1	pCi/L							
Total Radi	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0136	L	aboratory Cor	ntrol Sample			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		55	pCi/L		102	80	120			
Lab ID:	TapWater1MS	S	ample Matrix	Spike			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		100	pCi/L		97	70	130			
Lab ID:	TapWater1MSD	S	ample Matrix	Spike Duplicate			Run: RAD1	04-CS_160726A		08/01	/16 13:23
Radium 22	26		110	pCi/L		102	70	130	5.4	29.3	
Method:	E903.0									Batch: RA	226-0137
Lab ID:	MB-RA226-0137	3 M	lethod Blank				Run: RAD1	04-CS_160726B		08/02	/16 15:31
Total Radi	um as Ra226		0.007	pCi/L							U
Total Radi	um as Ra226 precision	(±)	0.02	pCi/L							
Total Radi	ium as Ra226 MDC		0.03	pCi/L							
Lab ID:	LCS-RA226-0137	L	aboratory Cor	ntrol Sample			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Total Radi	um as Ra226		51	pCi/L		0	80	120			
Lab ID:	TapWater1MS	S	ample Matrix	Spike			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Total Radi	um as Ra226		96	pCi/L		0	70	130			
Lab ID:	TapWater1MSD	S	ample Matrix	Spike Duplicate			Run: RAD1	04-CS_160726B		08/02	/16 15:31
Lab ID.				- p p							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: C_RA	228-5258
Lab ID:	LCS-228-RA226-8159) Lab	oratory Cor	itrol Sample			Run: SUB-0	C213222		07/07/	/16 08:15
Radium 22	28		7.4	pCi/L		102	80	120			
Lab ID:	MB-RA226-8159	3 Me	thod Blank				Run: SUB-0	C213222		07/07/	/16 08:15
Radium 22	28		0.5	pCi/L							U
Radium 22	28 precision (±)		8.0	pCi/L							
Radium 22	28 MDC		1	pCi/L							
Lab ID:	C16060931-005CMS	Sar	mple Matrix	Spike			Run: SUB-0	C213222		07/07/	/16 12:12
Radium 22	28		19	pCi/L		98	70	130			
Lab ID:	C16060931-005CMSE) Sar	mple Matrix	Spike Duplicate			Run: SUB-0	C213222		07/07/	/16 12:12
Radium 22	28		22	pCi/L		115	70	130	14	55.1	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Workorder	Sample	Recovery	
T16060113			
	T16060113-001C	100.58%	Ra-228
	T16060113-001C	101.07%	Ra-226
	T16060113-002C	101.42%	Ra-228
	T16060113-002C	104.08%	Ra-226
	T16060113-003C	124.00%	Ra-228
	T16060113-003C	126.64%	Ra-226
	T16060113-004C	94.96%	Ra-228
	T16060113-004C	96.98%	Ra-226
	T16060113-005C	101.74%	Ra-228
	T16060113-005C	103.91%	Ra-226
	T16060113-006C	96.35%	Ra-228
	T16060113-006C	98.40%	Ra-226
	T16060113-007C	101.04%	Ra-228
	T16060113-007C	103.20%	Ra-226

T16060113

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by:	Alisha D. Griffin		Date	Received: 6/22/2016
Reviewed by:	BL2000\ssuchar		Re	eceived by: trr
Reviewed Date:	6/24/2016		Ca	rrier name: Hand Del
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes	No 🗌	Not Present ✓
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗸	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes √	No 🗌	
Chain of custody agrees with	sample labels?	Yes	No 🗹	
Samples in proper container/	bottle?	Yes √	No 🗌	
Sample containers intact?		Yes √	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🗸	No 🗌	
All samples received within h (Exclude analyses that are co such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes	No 🔽	Not Applicable
Container/Temp Blank tempe	erature:	16.2°C On Ice - F	From Field	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable 🗸
Water - pH acceptable upon	receipt?	Yes √	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3633). Sample -002 and -007 collection times different from the container to COC. Per protocol, logging in per earliest collection time (listed on bottle). Receipt temperature checked with IR3: read temperature = 13.3°C; corrected temperature = 16.2°C. ADG 160623 09:00

Formats: Signature: Sample Disposal: Ridress: Rock E C F W T M P A Contact Name: Pwos. Contact Name: Project Name: Project Name: Pwos. Contact Name: Contact & Ph. C	Formatis: Contact Name, PWS, Permit, Etc. Sample Origin Prove Fax. Sample Origin Sample Origin Prove Fax. Sample Orig	ENERGY (E) ABORATORIES	Chain of Custody	of Cust	0,1		(Provide as much information as possible.)	Reccon as pos	ord ssible.)		Page 1 of 1	
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Beinetringed by James: Signature:	Plan K - 1 1 300 X	SAP MW-3		1603		X					S00-70	
Baimquished by Jampi: Date/Time: Signature:	Beinquisted by Imp. Sample Disposal: Return to Client: Lab Disposal: Certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in ordinal definition of this contract data will be clearly coursed on your analysis or	Jup - 7		1200	1	X					900-00	1
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	In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in ordinal configuration and the analysis requested. This cause as action of this constraint All sub-contract data will be clearly acted on your analytical report.		Return to Client:		Lab Dispos	sal:	TWOOD ART	Seal	Le 1886	16 MONT ON	ignature:	D

The results represented within this report relate only to the samples as submitted. This report may not be reproduced except in full. NELAP Certificate #T104704347-15-11

ANALYTICAL SUMMARY REPORT

August 11, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16060120

Quote ID: T3094

Project Name: CCRR

Energy Laboratories Inc. College Station TX received the following 8 samples for Texas Municipal Power Agency on 6/23/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
T16060120-001	SFL MW-3	06/23/16 11:10 06/23/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16060120-003	SFL MW-4	06/23/16 12:29 06/23/16	Groundwater	Same As Above
T16060120-004	SFL MW-2	06/23/16 14:12 06/23/16	Groundwater	Same As Above
T16060120-005	SFL MW-5	06/23/16 15:11 06/23/16	Groundwater	Same As Above
T16060120-006	SFL MW-6	06/23/16 15:58 06/23/16	Groundwater	Same As Above
T16060120-007	Dup-2	06/23/16 12:00 06/23/16	Groundwater	Same As Above
T16060120-008	EQ Blank-2	06/23/16 8:20 06/23/16	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 08/11/16

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16060120 CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR
Lab ID: T16060120-002
Client Sample ID: SFL MW-3

Report Date: 08/11/16
Collection Date: 06/23/16 11:10
DateReceived: 06/23/16
Matrix: Groundwater

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By PHYSICAL PROPERTIES Solids, Total Dissolved TDS @ 180 C 5940 mg/L 100 A2540 C 06/24/16 14:49 / adg **MAJOR IONS** Chloride D 50 1560 mg/L F300 0 06/30/16 19:51 / pwh Fluoride 0.8 mg/L 0.1 A4500-F C 06/28/16 13:15 / pwh Sulfate D 50 E300.0 2220 mg/L 06/30/16 19:51 / pwh Calcium 687 mg/L D 2 E200.7 06/27/16 15:08 / jtr D 2.4 mg/L 0.5 E200.7 06/27/16 15:08 / jtr Boron **METALS, TOTAL RECOVERABLE** 0.05 E200.7 07/05/16 12:57 / eli-b Antimony ND mg/L Arsenic ND mg/L 0.01 E200.8 07/06/16 15:09 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 12:57 / eli-b Beryllium 0.04 mg/L 0.001 E200.7 07/05/16 12:57 / eli-b 0.01 Cadmium ND mg/L E200.7 07/05/16 12:57 / eli-b Chromium 0.01 E200.7 ND mg/L 07/05/16 12:57 / eli-b 0.07 mg/L 0.02 E200.8 07/05/16 13:17 / eli-b Cobalt Lead 0.02 mg/L 0.01 E200.8 07/05/16 13:17 / eli-b Lithium 0.4 mg/L 0.01 E200.7 07/05/16 12:57 / eli-b 0.05 Molybdenum ND mg/L F200 7 07/05/16 12:57 / eli-b E200.8 07/05/16 13:17 / eli-b Selenium ND mg/L 0.01 **Thallium** ND mg/L 0.01 E200.8 07/05/16 13:17 / eli-b **METALS, TOTAL** 0.001 F245 1 Mercury 0.003 mg/L 07/05/16 17:33 / eli-b **RADIONUCLIDES - TOTAL RA-05** Radium 228 6.3 pCi/L 07/08/16 08:26 / eli-ca Radium 228 precision (±) 1.5 pCi/L **RA-05** 07/08/16 08:26 / eli-ca Radium 228 MDC 1.3 pCi/L **RA-05** 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 8.19 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 1.54 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 1.9 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.35 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 MDC 0.15 pCi/L E903.0 08/01/16 15:06 / sas

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

CCRR Project: Lab ID: T16060120-003

Client Sample ID: SFL MW-4

Report Date: 08/11/16 Collection Date: 06/23/16 12:29 DateReceived: 06/23/16

Matrix: Groundwater

Amalyana	D!	l laste -	0	D.	MCL/ QCL Method	Analysis Data / Da
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
Solids, Total Dissolved TDS @ 180 C	6200	mg/L		100	A2540 C	06/24/16 14:50 / adg
MAJOR IONS						
Chloride	1690	mg/L	D	20	E300.0	06/30/16 20:11 / pwh
Fluoride	0.1	mg/L		0.1	A4500-F	C 06/28/16 13:20 / pwh
Sulfate	2150	mg/L	D	20	E300.0	06/30/16 20:11 / pwh
Calcium	799	mg/L		1	E200.7	06/27/16 15:10 / jtr
Boron	0.6	mg/L	D	0.2	E200.7	06/27/16 15:10 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.7	07/05/16 13:01 / eli-b
Arsenic	ND	mg/L		0.01	E200.8	07/06/16 15:15 / eli-b
Barium	0.04	mg/L		0.01	E200.7	07/05/16 13:01 / eli-b
Beryllium	ND	mg/L		0.001	E200.7	07/05/16 13:01 / eli-b
Cadmium	ND	mg/L		0.01	E200.7	07/05/16 13:01 / eli-b
Chromium	ND	mg/L		0.01	E200.7	07/05/16 13:01 / eli-b
Cobalt	ND	mg/L		0.02	E200.8	07/05/16 13:20 / eli-b
ead	ND	mg/L		0.01	E200.8	07/05/16 13:20 / eli-b
ithium	0.5	mg/L		0.01	E200.7	07/05/16 13:01 / eli-b
Nolybdenum	ND	mg/L		0.05	E200.7	07/05/16 13:01 / eli-b
Selenium	ND	mg/L		0.01	E200.8	07/05/16 13:20 / eli-b
hallium	ND	mg/L		0.01	E200.8	07/05/16 13:20 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	07/01/16 16:23 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228	6.4	pCi/L			RA-05	07/08/16 08:26 / eli-ca
Radium 228 precision (±)	1.6	pCi/L			RA-05	07/08/16 08:26 / eli-ca
Radium 228 MDC	1.3	pCi/L			RA-05	07/08/16 08:26 / eli-ca
Radium 226 + Radium 228	6.85	pCi/L			A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	1.61	pCi/L			A7500-RA	08/11/16 00:00 / jleb
otal Radium as Ra226	0.43	pCi/L			E903.0	08/01/16 15:06 / sas
otal Radium as Ra226 precision (±)	0.17	pCi/L			E903.0	08/01/16 15:06 / sas
otal Radium as Ra226 MDC	0.15	pCi/L			E903.0	08/01/16 15:06 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

 Project:
 CCRR

 Lab ID:
 T16060120-004

Client Sample ID: SFL MW-2

Report Date: 08/11/16 **Collection Date:** 06/23/16 14:12 **DateReceived:** 06/23/16

Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	7950	mg/L		100		A2540 C	06/24/16 14:50 / adg
MAJOR IONS							
Chloride	2900	mg/L	D	50		E300.0	06/30/16 20:30 / pwh
Fluoride	0.3	mg/L		0.1		A4500-F C	06/28/16 13:25 / pwh
Sulfate	2010	mg/L	D	50		E300.0	06/30/16 20:30 / pwh
Calcium	797	mg/L	D	2		E200.7	06/27/16 15:12 / jtr
Boron	0.52	mg/L		0.05		E200.7	06/30/16 18:46 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	07/05/16 13:05 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	07/06/16 15:20 / eli-b
Barium	0.03	mg/L		0.01		E200.7	07/05/16 13:05 / eli-b
Beryllium	0.002	mg/L		0.001		E200.7	07/05/16 13:05 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	07/05/16 13:05 / eli-b
Chromium	ND	mg/L		0.01		E200.7	07/05/16 13:05 / eli-b
Cobalt	0.02	mg/L		0.02		E200.8	07/05/16 13:23 / eli-b
_ead	ND	mg/L		0.01		E200.8	07/05/16 13:23 / eli-b
Lithium	0.5	mg/L		0.01		E200.7	07/05/16 13:05 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	07/05/16 13:05 / eli-b
Selenium	ND	mg/L		0.01		E200.8	07/05/16 13:23 / eli-b
Γhallium	ND	mg/L		0.01		E200.8	07/05/16 13:23 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	07/01/16 16:25 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	7.7	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 228 precision (±)	1.8	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 226 + Radium 228	11.0	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	1.83	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Րotal Radium as Ra226	3.3	pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 precision (±)	0.50	pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 MDC	0.16	pCi/L				E903.0	08/01/16 15:06 / sas

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR
Lab ID: T16060120-005
Client Sample ID: SFL MW-5

Report Date: 08/11/16

Collection Date: 06/23/16 15:11

DateReceived: 06/23/16

Matrix: Groundwater

PHYSICAL PROPERTIES Solids, Total Dissolved TDS @ 180 C 8350 mg/L 100 A2540 C 06/24/16 14:50 / adg MAJOR IONS Chloride 2990 mg/L D 50 E300.0 06/30/16 20:50 / pwh Fluoride 0.2 mg/L 0.1 A4500-F C 06/28/16 13:31 / pwh Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Solids, Total Dissolved TDS @ 180 C 8350 mg/L 100 A2540 C 06/24/16 14:50 / adg MAJOR IONS Chloride 2990 mg/L D 50 E300.0 06/30/16 20:50 / pwh Fluoride 0.2 mg/L D 50 E300.0 06/28/16 13:31 / pwh Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b								
MAJOR IONS Chloride 2990 mg/L D 50 E300.0 06/30/16 20:50 / pwh Fluoride 0.2 mg/L 0.1 A4500-F C 06/28/16 13:31 / pwh Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	PHYSICAL PROPERTIES							
Chloride 2990 mg/L D 50 E300.0 06/30/16 20:50 / pwh Fluoride 0.2 mg/L 0.1 A4500-F C 06/28/16 13:31 / pwh Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Solids, Total Dissolved TDS @ 180 C	8350	mg/L		100		A2540 C	06/24/16 14:50 / adg
Fluoride 0.2 mg/L 0.1 A4500-F C 06/28/16 13:31 / pwh Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	MAJOR IONS							
Sulfate 2150 mg/L D 50 E300.0 06/30/16 20:50 / pwh Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Chloride	2990	mg/L	D	50		E300.0	06/30/16 20:50 / pwh
Calcium 878 mg/L D 2 E200.7 06/27/16 15:13 / jtr Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Fluoride	0.2	mg/L		0.1		A4500-F C	06/28/16 13:31 / pwh
Boron 3.5 mg/L D 0.5 E200.7 06/27/16 15:13 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Sulfate	2150	mg/L	D	50		E300.0	06/30/16 20:50 / pwh
METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Calcium	878	mg/L	D	2		E200.7	06/27/16 15:13 / jtr
Antimony ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Boron	3.5	mg/L	D	0.5		E200.7	06/27/16 15:13 / jtr
Arsenic ND mg/L 0.01 E200.8 07/06/16 15:25 / eli-b Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	METALS, TOTAL RECOVERABLE							
Barium 0.04 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Antimony	ND	mg/L		0.05		E200.7	07/05/16 13:16 / eli-b
Beryllium 0.008 mg/L 0.001 E200.7 07/05/16 13:16 / eli-b	Arsenic	ND	mg/L		0.01		E200.8	07/06/16 15:25 / eli-b
	Barium	0.04	mg/L		0.01		E200.7	07/05/16 13:16 / eli-b
	Beryllium	0.008	mg/L		0.001		E200.7	07/05/16 13:16 / eli-b
Cadmium ND mg/L 0.01 E200.7 07/05/16 13:16 / eli-b	Cadmium	ND	mg/L		0.01		E200.7	07/05/16 13:16 / eli-b
Chromium ND mg/L 0.01 E200.7 07/05/16 13:16 / eli-b	Chromium	ND	mg/L		0.01		E200.7	07/05/16 13:16 / eli-b
Cobalt 0.07 mg/L 0.02 E200.8 07/05/16 13:26 / eli-b	Cobalt	0.07	mg/L		0.02		E200.8	07/05/16 13:26 / eli-b
Lead ND mg/L 0.01 E200.8 07/05/16 13:26 / eli-b	Lead	ND	mg/L		0.01		E200.8	07/05/16 13:26 / eli-b
Lithium 0.7 mg/L 0.01 E200.7 07/05/16 13:16 / eli-b	Lithium	0.7	mg/L		0.01		E200.7	07/05/16 13:16 / eli-b
Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:16 / eli-b	Molybdenum	ND	mg/L		0.05		E200.7	07/05/16 13:16 / eli-b
Selenium ND mg/L 0.01 E200.8 07/05/16 13:26 / eli-b	Selenium	ND	mg/L		0.01		E200.8	07/05/16 13:26 / eli-b
Thallium ND mg/L 0.01 E200.8 07/05/16 13:26 / eli-b	Thallium	ND	mg/L		0.01		E200.8	07/05/16 13:26 / eli-b
METALS, TOTAL	METALS, TOTAL							
Mercury ND mg/L 0.001 E245.1 07/01/16 16:27 / eli-b	Mercury	ND	mg/L		0.001		E245.1	07/01/16 16:27 / eli-b
RADIONUCLIDES - TOTAL	RADIONUCLIDES - TOTAL							
Radium 228 5.9 pCi/L RA-05 07/08/16 08:26 / eli-ca	Radium 228	5.9	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 228 precision (±) 1.4 pCi/L RA-05 07/08/16 08:26 / eli-ca	Radium 228 precision (±)	1.4	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 228 MDC 1.3 pCi/L RA-05 07/08/16 08:26 / eli-ca	Radium 228 MDC	1.3	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 226 + Radium 228 7.52 pCi/L A7500-RA 08/11/16 00:00 / jleb	Radium 226 + Radium 228	7.52	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±) 1.48 pCi/L A7500-RA 08/11/16 00:00 / jleb	Radium 226 + Radium 228 precision (±)	1.48	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226 1.6 pCi/L E903.0 08/01/16 15:06 / sas		1.6	pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 precision (±) 0.30 pCi/L E903.0 08/01/16 15:06 / sas	Total Radium as Ra226 precision (±)	0.30	pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 MDC 0.13 pCi/L E903.0 08/01/16 15:06 / sas	Total Radium as Ra226 MDC	0.13	pCi/L				E903.0	08/01/16 15:06 / sas

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR
Lab ID: T16060120-006
Client Sample ID: SFL MW-6

| Power Agency | Report Date: 08/11/16 |
| Collection Date: 06/23/16 15:58 |
| DateReceived: 06/23/16 |

Matrix: Groundwater

PhySiCal Properties Solids, Total Dissolved TDS @ 180 C 8650 mg/L 100 A2540 C 06/28/16 16:03 / pwh						MCL/		
MAJOR IONS MAJOR IONS Major Ma	Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS MAJOR IONS Major Ma	PHYSICAL PROPERTIES							
Chloride 3350 mg/L D 50 E300.0 06/30/16 21:48 / pwh	Solids, Total Dissolved TDS @ 180 C	8650	mg/L		100		A2540 C	06/28/16 16:03 / pwh
Fluoride 0.7 mg/L 0.1 A4500-F C 06/28/16 13:39 / pwh Sulfate 2230 mg/L D 50 E300.0 06/30/16 21:48 / pwh Calcium 910 mg/L D 2 E200.7 06/27/16 15:15 / jtr Boron 0.50 mg/L D 0.5 E200.7 06/30/16 18:48 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 07/06/16 15:31 / eli-b Barium 0.3 mg/L 0.01 E200.8 07/06/16 15:31 / eli-b Beryllium 0.03 mg/L 0.001 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.00 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.00 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Choalt 0.0 mg/L 0	MAJOR IONS							
Sulfate 2230 mg/L D 50 E300.0 06/30/16 21:48 / pwh Calcium 910 mg/L D 2 E200.7 06/27/16 15:15 / jtr Boron 0.50 mg/L 0.05 E200.7 06/30/16 15:15 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 07/06/16 15:31 / eli-b Barium 0.3 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Beryllium 0.03 mg/L 0.001 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chobalt 0.1 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chobalt 0.1 mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Lead 0.6 mg/L	Chloride	3350	mg/L	D	50		E300.0	06/30/16 21:48 / pwh
Sulfate 2230 mg/L D 50 E300.0 06/30/16 21:48 / pwh Calcium 910 mg/L D 2 E200.7 06/27/16 15:15 / jtr Boron 0.50 mg/L 0.05 E200.7 06/30/16 15:15 / jtr METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Arsenic 0.02 mg/L 0.01 E200.8 07/06/16 15:31 / eli-b Barium 0.3 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Beryllium 0.03 mg/L 0.001 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chobalt 0.1 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chobalt 0.1 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Lead 0.06 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L	Fluoride	0.7	mg/L		0.1		A4500-F C	06/28/16 13:39 / pwh
Calcium 910 mg/L D 2 E200.7 (06/27/16 15:15 / jtr born) Born 0.50 mg/L 0.05 E200.7 (06/30/16 15:15 / jtr born) Born 0.05 mg/L 0.05 E200.7 (06/30/16 18:48 / jtr br) METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.7 (07/05/16 13:20 / eli-b br) 0.00 mg/L 0.01 E200.8 (07/06/16 15:31 / eli-b br) 0.00 for ibronium 0.01 (0.01 mg/L br) 0.01 (0.01 mg/L br) 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.01 mg/L br) 0.00 for ibronium 0.00	Sulfate		•	D	50		E300.0	06/30/16 21:48 / pwh
Boron 0.50 mg/L 0.05 E200.7 06/30/16 18:48 / jtr	Calcium		-	D	2		E200.7	•
Antimony	Boron		•		0.05		E200.7	· · · · · · · · · · · · · · · · · · ·
Antimony	METALS, TOTAL RECOVERABLE							
Barium 0.3 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Beryllium 0.03 mg/L 0.001 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.02 E200.8 07/05/16 13:20 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 07/05/16 13:29 / eli-b Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 PROS 07/08/16 08:26 / eli-ca	Antimony	ND	mg/L		0.05		E200.7	07/05/16 13:20 / eli-b
Barium 0.3 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Beryllium 0.03 mg/L 0.001 E200.7 07/05/16 13:20 / eli-b Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.02 E200.8 07/05/16 13:20 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 07/05/16 13:29 / eli-b Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 PROS 07/08/16 08:26 / eli-ca	Arsenic	0.02	mg/L		0.01		E200.8	07/06/16 15:31 / eli-b
Cadmium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 07/05/16 13:29 / eli-b Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Thallium ND mg/L 0.01 E200.7 07/05/16 13:20 / eli-b METALS, TOTAL METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:0	Barium		-		0.01		E200.7	07/05/16 13:20 / eli-b
Chromium 0.01 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Cobalt 0.1 mg/L 0.02 E200.8 07/05/16 13:20 / eli-b Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:29 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b METALS, TOTAL Radium 228 ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b METALS, TOTAL Radium 228 Precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 H1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 Precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Beryllium	0.03	mg/L		0.001		E200.7	07/05/16 13:20 / eli-b
Cobalt 0.1 mg/L 0.02 E200.8 07/05/16 13:29 / eli-b Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:20 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 TOTAL Radium 228 Precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 H26 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Cadmium	ND	mg/L		0.01		E200.7	07/05/16 13:20 / eli-b
Lead 0.06 mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Chromium	0.01	mg/L		0.01		E200.7	07/05/16 13:20 / eli-b
Lithium 0.6 mg/L 0.01 E200.7 07/05/16 13:20 / eli-b Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b NETALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b NETALS, TOTAL RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 H26 + Radium 228 11.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Cobalt	0.1	mg/L		0.02		E200.8	07/05/16 13:29 / eli-b
Molybdenum ND mg/L 0.05 E200.7 07/05/16 13:20 / eli-b Selenium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Lead	0.06	mg/L		0.01		E200.8	07/05/16 13:29 / eli-b
Selenium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Thallium ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Lithium	0.6	mg/L		0.01		E200.7	07/05/16 13:20 / eli-b
METALS, TOTAL ND mg/L 0.01 E200.8 07/05/16 13:29 / eli-b Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Molybdenum	ND	mg/L		0.05		E200.7	07/05/16 13:20 / eli-b
METALS, TOTAL Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Selenium	ND	mg/L		0.01		E200.8	07/05/16 13:29 / eli-b
Mercury ND mg/L 0.001 E245.1 07/01/16 16:29 / eli-b RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Thallium	ND	mg/L		0.01		E200.8	07/05/16 13:29 / eli-b
RADIONUCLIDES - TOTAL Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	METALS, TOTAL							
Radium 228 11 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Mercury	ND	mg/L		0.001		E245.1	07/01/16 16:29 / eli-b
Radium 228 precision (±) 2.4 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	RADIONUCLIDES - TOTAL							
Radium 228 MDC 1.6 pCi/L RA-05 07/08/16 08:26 / eli-ca Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Radium 228	11	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 226 + Radium 228 11.6 pCi/L A7500-RA 08/11/16 00:00 / jleb Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Radium 228 precision (±)	2.4	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Radium 226 + Radium 228 precision (±) 2.43 pCi/L A7500-RA 08/11/16 00:00 / jleb Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Radium 228 MDC	1.6	pCi/L				RA-05	07/08/16 08:26 / eli-ca
Total Radium as Ra226 0.63 pCi/L E903.0 08/01/16 15:06 / sas Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Radium 226 + Radium 228	11.6	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226 precision (±) 0.11 pCi/L E903.0 08/01/16 15:06 / sas	Radium 226 + Radium 228 precision (±)	2.43	pCi/L				A7500-RA	08/11/16 00:00 / jleb
	Total Radium as Ra226	0.63	pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 MDC 0.06 pCi/L E903.0 08/01/16 15:06 / sas	Total Radium as Ra226 precision (±)	0.11	pCi/L				E903.0	08/01/16 15:06 / sas
	Total Radium as Ra226 MDC	0.06	pCi/L				E903.0	08/01/16 15:06 / sas

⁻ Total Radium as Ra226: Sample matrix interference resulted in high chemical recoveries which can bias the results low.

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16060120-007

Client Sample ID: Dup-2

Report Date: 08/11/16

Collection Date: 06/23/16 12:00

DateReceived: 06/23/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
							,
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	5710	mg/L		100		A2540 C	06/28/16 16:03 / pwh
MAJOR IONS							
Chloride	1520	mg/L	D	50		E300.0	06/30/16 22:46 / pwh
Fluoride	0.8	mg/L		0.1		A4500-F C	06/28/16 13:46 / pwh
Sulfate	2190	mg/L	D	50		E300.0	06/30/16 22:46 / pwh
Calcium	688	mg/L	D	2		E200.7	06/27/16 15:17 / jtr
Boron	2.4	mg/L	D	0.5		E200.7	06/27/16 15:17 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	07/05/16 13:24 / eli-b
Arsenic		mg/L		0.01		E200.8	07/05/16 14:13 / eli-b
Barium		mg/L		0.01		E200.7	07/05/16 13:24 / eli-b
Beryllium	0.04	mg/L		0.001		E200.7	07/05/16 13:24 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	07/05/16 13:24 / eli-b
Chromium	ND	mg/L		0.01		E200.7	07/05/16 13:24 / eli-b
Cobalt	0.07	mg/L		0.02		E200.8	07/05/16 14:13 / eli-b
Lead	0.02	mg/L		0.01		E200.8	07/05/16 14:13 / eli-b
Lithium	0.3	mg/L		0.01		E200.7	07/05/16 13:24 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	07/05/16 13:24 / eli-b
Selenium	ND	mg/L		0.01		E200.8	07/05/16 14:13 / eli-b
Thallium	ND	mg/L		0.01		E200.8	07/05/16 14:13 / eli-b
METALS, TOTAL							
Mercury	0.003	mg/L		0.001		E245.1	07/05/16 17:35 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	3.4	pCi/L				RA-05	07/08/16 09:59 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	07/08/16 09:59 / eli-ca
Radium 228 MDC		pCi/L				RA-05	07/08/16 09:59 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	08/11/16 00:00 / jleb
Total Radium as Ra226		pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 precision (±)		pCi/L				E903.0	08/01/16 15:06 / sas
Total Radium as Ra226 MDC		pCi/L				E903.0	08/01/16 15:06 / sas

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

CCRR Project: Lab ID: T16060120-008

Client Sample ID: EQ Blank-2

Report Date: 08/11/16 Collection Date: 06/23/16 08:20 DateReceived: 06/23/16

Matrix: Groundwater

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
analyses	Result	Ullits	Qualifiers	IXE.	WOL	Wietiloa	Allalysis Date / By
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/27/16 16:15 / jjc
MAJOR IONS							
Chloride	ND	mg/L		1		E300.0	06/30/16 23:06 / pwh
Fluoride	ND	mg/L		0.1		A4500-F C	06/28/16 14:06 / pwh
Sulfate	ND	mg/L		1		E300.0	06/30/16 23:06 / pwh
Calcium	ND	mg/L		1		E200.7	06/30/16 18:51 / jtr
Boron	ND	mg/L		0.05		E200.7	06/30/16 18:51 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	07/05/16 13:28 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	07/05/16 14:16 / eli-b
Barium	ND	mg/L		0.01		E200.7	07/05/16 13:28 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	07/05/16 13:28 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	07/05/16 13:28 / eli-b
Chromium	ND	mg/L		0.01		E200.7	07/05/16 13:28 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	07/05/16 14:16 / eli-b
ead	ND	mg/L		0.01		E200.8	07/05/16 14:16 / eli-b
ithium	ND	mg/L		0.01		E200.7	07/05/16 13:28 / eli-b
Nolybdenum	ND	mg/L		0.05		E200.7	07/05/16 13:28 / eli-b
Selenium	ND	mg/L		0.01		E200.8	07/05/16 14:16 / eli-b
hallium	ND	mg/L		0.01		E200.8	07/05/16 14:16 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	07/01/16 16:32 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	0.80	pCi/L	U			RA-05	07/08/16 09:59 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	07/08/16 09:59 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	07/08/16 09:59 / eli-ca
Radium 226 + Radium 228	0.828	pCi/L				A7500-RA	08/11/16 00:00 / jleb
Radium 226 + Radium 228 precision (±)	1.01	pCi/L				A7500-RA	08/11/16 00:00 / jleb
otal Radium as Ra226	0.03	pCi/L	U			E903.0	08/01/16 15:06 / sas
otal Radium as Ra226 precision (±)	0.1	pCi/L				E903.0	08/01/16 15:06 / sas
otal Radium as Ra226 MDC	0.18	pCi/L				E903.0	08/01/16 15:06 / sas

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A2540 C									Batch: TDS	3160624A
Lab ID:	MB-1_160624A	M	ethod Blank				Run: BAL3_	_160624A		06/24/	16 14:44
Solids, Tot	al Dissolved TDS @ 180	0 C	ND	mg/L	5						
Lab ID:	LCS-2_160624A	La	boratory Cor	ntrol Sample	e		Run: BAL3_	_160624A		06/24/	16 14:45
Solids, Tot	al Dissolved TDS @ 180	0 C	983	mg/L	10	98	90	110			
Lab ID:	T16060097-005A DUP	Sa	ample Duplica	ate			Run: BAL3	_160624A		06/24/	16 14:46
Solids, Tot	al Dissolved TDS @ 180	0 C	2670	mg/L	20				1.0	5	
Method:	A2540 C									Batch: TDS	3160627A
Lab ID:	MB-2_160627A	M	ethod Blank				Run: BAL3_	_160627A		06/27/	16 16:15
Solids, Tot	al Dissolved TDS @ 180	0 C	ND	mg/L	5						
Lab ID:	LCS-3_160627A	La	boratory Cor	ntrol Sample	e		Run: BAL3	_160627A		06/27/	16 16:15
Solids, Tot	al Dissolved TDS @ 180) C	1130	mg/L	11	101	90	110			
Lab ID:	T16060120-008A DUP	Sa	ample Duplica	ate			Run: BAL3_	_160627A		06/27/	16 16:16
Solids, Tot	al Dissolved TDS @ 180	0 C	ND	mg/L	10					5	
Method:	A2540 C									Batch: TDS	3160628A
Lab ID:	MB-1_160628A	M	ethod Blank				Run: BAL3_	_160628B		06/28/	16 16:02
Solids, Tot	al Dissolved TDS @ 180	0 C	ND	mg/L	5						
Lab ID:	LCS-2_160628A	La	boratory Cor	ntrol Sample	e		Run: BAL3_	_160628B		06/28/	16 16:02
Solids, Tot	al Dissolved TDS @ 180	0 C	1110	mg/L	11	100	90	110			
Lab ID:	T16060120-006A DUP	' Sa	ample Duplica	ate			Run: BAL3	_160628B		06/28/	16 16:03
Solids, Tot	al Dissolved TDS @ 180	0 C	8790	mg/L	100				1.6	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1_	_160628A
Lab ID:	CCV-F2	Co	ntinuing Cal	ibration Veri	fication Standar	·d				06/28/	/16 13:50
Fluoride			1.98	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch	n: R68748
Lab ID:	LCS-F-3733	Lab	ooratory Cor	ntrol Sample	;		Run: ATT1	_160628A		06/28/	/16 13:53
Fluoride			4.82	mg/L	0.10	94	90	110			
Lab ID:	MBLK	Me	thod Blank				Run: ATT1	_160628A		06/28/	/16 14:00
Fluoride			0.04	mg/L	0.002						
Lab ID:	T16060120-008ADUF	P Sai	mple Duplic	ate			Run: ATT1	_160628A		06/28/	/16 14:11
Fluoride			0.0200	mg/L	0.10					10	
Lab ID:	T16060120-008AMS	Sai	mple Matrix	Spike			Run: ATT1	_160628A		06/28/	/16 14:14
Fluoride			4.71	mg/L	0.10	92	90	110			

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 08/11/16 Project: CCRR Work Order: T16060120

Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analytic	al Run	ICP102-CS	_160627A
Lab ID:	Initial Calib Verif	2	Initial Calibration	on Verification St	andard					06/27/	16 14:42
Boron			1.02	mg/L	0.050	102	95	105			
Calcium			49.1	mg/L	1.0	98	95	105			
Lab ID:	Cont Calib Blank	2	Continuing Cal	ibration Blank						06/27/	16 14:44
Boron			-0.00360	mg/L	0.050						
Calcium			-0.000971	mg/L	1.0						
Method:	E200.7									Batch	n: R68741
Lab ID:	IPC	2	Initial Precision	and Recovery			Run: ICP10	2-CS_160627A		06/27/	16 14:49
Boron			1.00	mg/L	0.050	100	95	105			
Calcium			50.3	mg/L	1.0	101	95	105			
Lab ID:	LCS-160627	2	Laboratory Cor	ntrol Sample			Run: ICP10	2-CS_160627A		06/27/	16 14:54
Calcium			49.3	mg/L	1.0	99	85	115			
Boron			1.03	mg/L	0.050	103	85	115			
Lab ID:	MB-160627	2	Method Blank				Run: ICP10	2-CS_160627A		06/27/	16 14:56
Calcium			ND	mg/L	0.08						
Boron			ND	mg/L	0.001						
Lab ID:	T16060120-001ASD	2	Serial Dilution				Run: ICP10	2-CS_160627A		06/27/	16 14:59
Calcium			1010	mg/L	10		0	0	9.4	10	
Boron			0.196	mg/L	2.5		0	0		10	N
Lab ID:	T16060120-001AMS	2	Sample Matrix	Spike			Run: ICP10	2-CS_160627A		06/27/	16 15:01
Calcium			1440	mg/L	2.0	103	70	130			
Boron			10.9	mg/L	0.50	105	70	130			
Lab ID:	T16060120-001AMS) 2	Sample Matrix	Spike Duplicate			Run: ICP10	2-CS_160627A		06/27/	16 15:03
Calcium			1430	mg/L	2.0	102	70	130	0.4	20	
Boron			11.0	mg/L	0.50	105	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analytic	al Run:	ICP102-CS_	160630E
Lab ID:	Initial Calib Verif	2	Initial Calibration	on Verification S	tandard					06/30/	16 18:12
Boron			0.997	mg/L	0.050	100	95	105			
Calcium			49.5	mg/L	1.0	99	95	105			
Lab ID:	Cont Calib Blank	2 (Continuing Cal	ibration Blank						06/30/	16 18:14
Boron			0.00156	mg/L	0.050						
Calcium			-0.00112	mg/L	1.0						
Method:	E200.7									Batch	n: R68816
Lab ID:	IPC	2	Initial Precisior	and Recovery			Run: ICP10	2-CS_160630E		06/30/	16 18:18
Boron			0.976	mg/L	0.050	98	95	105			
Calcium			48.7	mg/L	1.0	97	95	105			
Lab ID:	LCS-160630	2	Laboratory Cor	ntrol Sample			Run: ICP10	2-CS_160630E		06/30/	16 18:25
Calcium			49.5	mg/L	1.0	99	85	115			
Boron			0.985	mg/L	0.050	98	85	115			
Lab ID:	MB-160630	2	Method Blank				Run: ICP10	2-CS_160630E		06/30/	16 18:27
Calcium			ND	mg/L	0.08						
Boron			0.001	mg/L	0.001						
Lab ID:	T16060109-001ASD	2 :	Serial Dilution				Run: ICP10	2-CS_160630E		06/30/	16 18:31
Calcium			38.0	mg/L	1.0		0	0	4.1	10	
Boron			0.0822	mg/L	0.25		0	0		10	
Lab ID:	T16060109-001AMS	2 :	Sample Matrix	Spike			Run: ICP10	2-CS_160630E		06/30/	16 18:33
Calcium			86.5	mg/L	1.0	100	70	130			
Boron			1.11	mg/L	0.050	103	70	130			
Lab ID:	T16060109-001AMS	2 :	Sample Matrix	Spike Duplicate			Run: ICP10	2-CS_160630E		06/30/	16 18:35
Calcium			86.4	mg/L	1.0	100	70	130	0.1	20	
Boron			1.12	mg/L	0.050	104	70	130	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7								Analytic	al Run: SUB	-B263344
₋ab ID:	ICV	7 Co	ntinuing Cal	ibration Verif	ication Standa	rd				07/05/	/16 11:41
Antimony			2.45	mg/L	0.050	98	95	105			
Barium			2.53	mg/L	0.10	101	95	105			
Beryllium			1.25	mg/L	0.010	100	95	105			
Cadmium			2.46	mg/L	0.010	98	95	105			
Chromium			2.51	mg/L	0.050	100	95	105			
Lithium			1.26	mg/L	0.10	101	95	105			
Molybdenu	ım		2.46	mg/L	0.10	99	95	105			
Method:	E200.7									Batch: I	B_100518
.ab ID:	MB-100518	7 Me	thod Blank				Run: SUB-E	3263344		07/05/	/16 12:31
Antimony			ND	mg/L	0.01						
Barium			ND	mg/L	0.0002						
Beryllium			ND	mg/L	8E-05						
Cadmium			ND	mg/L	0.0004						
Chromium			ND	mg/L	0.003						
Lithium			0.004	mg/L	0.002						
Molybdenu	ım		0.005	mg/L	0.003						
ab ID:	LCS-100518	7 Lat	boratory Co	ntrol Sample			Run: SUB-E	3263344		07/05/	/16 12:35
Antimony			0.520	mg/L	0.10	104	85	115			
Barium			0.532	mg/L	0.10	106	85	115			
Beryllium			0.262	mg/L	0.010	105	85	115			
Cadmium			0.258	mg/L	0.010	103	85	115			
Chromium			0.527	mg/L	0.050	105	85	115			
Lithium			0.535	mg/L	0.10	106	85	115			
Molybdenu	ım		0.520	mg/L	0.10	103	85	115			
ab ID:	T16060120-001B	7 Sa	mple Matrix	Spike			Run: SUB-E	3263344		07/05/	/16 12:50
Antimony			0.506	mg/L	0.025	101	70	130			
Barium			0.540	mg/L	0.050	103	70	130			
Beryllium			0.295	mg/L	0.0010	102	70	130			
Cadmium			0.250	mg/L	0.0010	97	70	130			
Chromium			0.505	mg/L	0.0050	99	70	130			
Lithium			1.15	mg/L	0.10	106	70	130			
Molybdenu	ım		0.505	mg/L	0.0065	99	70	130			
.ab ID:	T16060120-001B	7 Sa	mple Matrix	Spike Duplic	ate		Run: SUB-E	3263344		07/05/	/16 12:54
Antimony			0.491	mg/L	0.025	98	70	130	3.0	20	
Barium			0.558	mg/L	0.050	107	70	130	3.2	20	
Beryllium			0.305	mg/L	0.0010	106	70	130	3.4	20	
Cadmium			0.252	mg/L	0.0010	97	70	130	0.7	20	
Chromium			0.515	mg/L	0.0050	101	70	130	1.8	20	
			1.17	mg/L	0.10	111	70	130	2.2	20	
Lithium											

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch: E	3_100518
Lab ID:	B16062493-001BMS3	7 Sar	mple Matrix	Spike			Run: SUB-E	3263344		07/05/	16 13:49
Antimony			0.495	mg/L	0.015	99	70	130			
Barium			0.530	mg/L	0.050	104	70	130			
Beryllium			0.253	mg/L	0.0010	101	70	130			
Cadmium			0.251	mg/L	0.0010	100	70	130			
Chromium			0.505	mg/L	0.0050	101	70	130			
Lithium			0.539	mg/L	0.10	107	70	130			
Molybdenu	m		0.515	mg/L	0.0048	103	70	130			
Lab ID:	B16062493-001BMSE) 7 Sar	mple Matrix	Spike Duplicate			Run: SUB-E	3263344		07/05/	16 13:59
Antimony			0.532	mg/L	0.015	106	70	130	7.2	20	
Barium			0.544	mg/L	0.050	107	70	130	2.7	20	
Beryllium			0.256	mg/L	0.0010	103	70	130	1.3	20	
Cadmium			0.257	mg/L	0.0010	103	70	130	2.4	20	
Chromium			0.514	mg/L	0.0050	103	70	130	1.9	20	
Lithium			0.555	mg/L	0.10	110	70	130	2.9	20	
Molybdenu	m		0.517	mg/L	0.0048	103	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060120

Analyte		Count Re	esult	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.8								Analytical Run: SU	B-B263348
Lab ID:	QCS	11 Initial Ca	alibratio	n Verificatio	on Standard				07/0	5/16 11:42
Antimony		0.0	0507	mg/L	0.050	101	90	110		
Arsenic		0.0	0503	mg/L	0.0050	101	90	110		
Barium		0.0	0489	mg/L	0.10	98	90	110		
Beryllium		0.0	0269	mg/L	0.0010	107	90	110		
Cadmium		0.0	0255	mg/L	0.0010	102	90	110		
Chromium	ı	0.0	0497	mg/L	0.010	99	90	110		
Cobalt		0.0	0500	mg/L	0.010	100	90	110		
Lead		0.0	0492	mg/L	0.010	98	90	110		
Molybdenu	um	0.0	0489	mg/L	0.0050	98	90	110		
Selenium		0.0	0484	mg/L	0.0050	97	90	110		
Thallium		0.0	0492	mg/L	0.10	98	90	110		
Lab ID:	QCS	11 Initial Ca	alibratio	n Verificatio	on Standard				07/0	5/16 14:01
Antimony		0.0	0498	mg/L	0.050	100	90	110		
Arsenic		0.0	0501	mg/L	0.0050	100	90	110		
Barium		0.0	0489	mg/L	0.10	98	90	110		
Beryllium		0.0	0255	mg/L	0.0010	102	90	110		
Cadmium		0.0	0253	mg/L	0.0010	101	90	110		
Chromium	1		0497	mg/L	0.010	99	90	110		
Cobalt		0.0	0499	mg/L	0.010	100	90	110		
Lead		0.0	0487	mg/L	0.010	97	90	110		
Molybdenu	um	0.0	0485	mg/L	0.0050	97	90	110		
Selenium		0.0	0500	mg/L	0.0050	100	90	110		
Thallium			0489	mg/L	0.10	98	90	110		
Method:	E200.8								Batch	: B_100518
Lab ID:	MB-100518	11 Method	Blank				Run: SUB-F	3263348	07/0	5/16 12:42
Antimony		0.0	0002	mg/L	3E-05					
Arsenic			ND	mg/L	7E-05					
Barium			ND	mg/L	9E-05					
Beryllium			ND	mg/L	9E-06					
Cadmium		2	E-05	mg/L	2E-05					
Chromium	1		0002	mg/L	4E-05					
Cobalt			ND	mg/L	8E-06					
Lead		3	E-05	mg/L	2E-05					
Molybdenu	um		0002	mg/L	3E-05					
Selenium			ND	mg/L	0.0004					
Thallium			ND	mg/L	1.0E-05					
	T16060120-001B	11 Sample	Matrix S	Spike			Run: SUB-E	3263348	07/0	5/16 13:02
).544	mg/L	0.0010	109	70	130		
Lab ID:		U		-						
			.529	mg/L	0.0010	105	70	130		
Lab ID: Antimony Arsenic		0).529).540	mg/L mg/L	0.0010 0.050	105 103	70 70	130 130		
Lab ID: Antimony		0).529).540).286	mg/L mg/L mg/L	0.0010 0.050 0.0010	105 103 97	70 70 70	130 130 130		

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: E	3_100518
Lab ID:	T16060120-001B	11 Sa	mple Matrix	Spike			Run: SUB-	3263348		07/05/	16 13:02
Chromium			0.503	mg/L	0.0050	100	70	130			
Cobalt			0.591	mg/L	0.0050	97	70	130			
Lead			0.667	mg/L	0.0010	128	70	130			
Molybdenu	m		0.579	mg/L	0.0010	116	70	130			
Selenium			0.514	mg/L	0.0010	102	70	130			
Thallium			0.619	mg/L	0.00050	123	70	130			
Lab ID:	T16060120-001B	11 Sa	mple Matrix	Spike Dupli	cate		Run: SUB-l	B263348		07/05/	16 13:05
Antimony			0.556	mg/L	0.0010	111	70	130	2.2	20	
Arsenic			0.535	mg/L	0.0010	106	70	130	1.2	20	
Barium			0.552	mg/L	0.050	105	70	130	2.2	20	
Beryllium			0.292	mg/L	0.0010	100	70	130	2.4	20	
Cadmium			0.270	mg/L	0.0010	104	70	130	1.5	20	
Chromium			0.518	mg/L	0.0050	103	70	130	2.9	20	
Cobalt			0.603	mg/L	0.0050	100	70	130	2.1	20	
Lead			0.729	mg/L	0.0010	140	70	130	8.8	20	S
Molybdenui	m		0.588	mg/L	0.0010	118	70	130	1.7	20	
Selenium			0.540	mg/L	0.0010	108	70	130	5.0	20	
Thallium			0.679	mg/L	0.00050	135	70	130	9.2	20	S
Lab ID:	LCS-100518	11 Lat	ooratory Co	ntrol Sample)		Run: SUB-l	3263348		07/05/	16 13:08
Antimony			0.563	mg/L	0.0050	113	85	115			
Arsenic			0.507	mg/L	0.0010	101	85	115			
Barium			0.501	mg/L	0.010	100	85	115			
Beryllium			0.274	mg/L	0.0010	110	85	115			
Cadmium			0.265	mg/L	0.0010	106	85	115			
Chromium			0.508	mg/L	0.0010	102	85	115			
Cobalt			0.489	mg/L	0.0010	98	85	115			
Lead			0.558	mg/L	0.0010	112	85	115			
Molybdenui	m		0.541	mg/L	0.0050	108	85	115			
Selenium			0.501	mg/L	0.0050	100	85	115			
Thallium			0.541	mg/L	0.0010	108	85	115			
Lab ID:	B16062493-001BMS3	3 11 Sa	mple Matrix	Spike			Run: SUB-l	3263348		07/05/	16 14:25
Antimony			0.543	mg/L	0.0010	109	70	130			
Arsenic			0.502	mg/L	0.0010	100	70	130			
Barium			0.511	mg/L	0.050	100	70	130			
Beryllium			0.247	mg/L	0.0010	99	70	130			
Cadmium			0.257	mg/L	0.0010	103	70	130			
Chromium			0.508	mg/L	0.0050	102	70	130			
Cobalt			0.479	mg/L	0.0050	96	70	130			
Lead			0.558	mg/L	0.0010	111	70	130			
Molybdenu	m		0.512	mg/L	0.0010	102	70	130			
Selenium			0.510	mg/L	0.0010	102	70	130			
Thallium			0.542	mg/L	0.00050	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

 $\ensuremath{\mathsf{ND}}$ - $\ensuremath{\mathsf{Not}}$ detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: E	3_100518
Lab ID:	B16062493-001BMS3	11 Sam	nple Matrix	Spike			Run: SUB-l	3263348		07/05/	16 14:25
Lab ID:	B16062493-001BMSE	11 Sam	nple Matrix	Spike Duplicate			Run: SUB-I	3263348		07/05/	16 14:28
Antimony			0.550	mg/L	0.0010	110	70	130	1.3	20	
Arsenic			0.512	mg/L	0.0010	102	70	130	2.0	20	
Barium			0.529	mg/L	0.050	104	70	130	3.5	20	
Beryllium			0.253	mg/L	0.0010	101	70	130	2.2	20	
Cadmium			0.261	mg/L	0.0010	105	70	130	1.6	20	
Chromium			0.527	mg/L	0.0050	105	70	130	3.6	20	
Cobalt			0.482	mg/L	0.0050	96	70	130	0.6	20	
Lead			0.568	mg/L	0.0010	113	70	130	1.8	20	
Molybdenu	ım		0.513	mg/L	0.0010	103	70	130	0.2	20	
Selenium			0.524	mg/L	0.0010	105	70	130	2.7	20	
Thallium			0.555	mg/L	0.00050	111	70	130	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B26340
Lab ID:	QCS	In	itial Calibratio	n Verificatio	n Standard					07/06/	16 12:07
Arsenic			0.0492	mg/L	0.0050	98	90	110			
Method:	E200.8									Batch: E	3_100518
Lab ID:	MB-100518	11 M	ethod Blank				Run: SUB-E	3263404			_ '16
Antimony			ND	mg/L	4E-05						
Arsenic			ND	mg/L	6E-05						
Barium			ND	mg/L	5E-05						
Beryllium			ND	mg/L	6E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	0.0002						
Cobalt			ND	mg/L	1E-05						
Lead			ND	mg/L	3E-05						
Molybdenu	m		0.0001	mg/L	3E-05						
Selenium	III		0.0001 ND	_	0.0002						
Thallium			4E-05	mg/L	1E-05						
maillum			4E-05	mg/L	1E-05						
Lab ID:	LCS-100518	11 La	aboratory Cor	ntrol Sample			Run: SUB-	3263404		07/06/	16 16:08
Antimony			0.520	mg/L	0.0050	104	85	115			
Arsenic			0.481	mg/L	0.0010	96	85	115			
Barium			0.470	mg/L	0.010	94	85	115			
Beryllium			0.281	mg/L	0.0010	112	85	115			
Cadmium			0.259	mg/L	0.0010	103	85	115			
Chromium			0.461	mg/L	0.0010	92	85	115			
Cobalt			0.448	mg/L	0.0010	90	85	115			
Lead			0.482	mg/L	0.0010	96	85	115			
Molybdenu	m		0.551	mg/L	0.0050	110	85	115			
Selenium			0.497	mg/L	0.0050	99	85	115			
Thallium			0.463	mg/L	0.0010	93	85	115			
Lab ID:	B16062493-001BMS3	3 11 Sa	ample Matrix	Spike			Run: SUB-E	3263404		07/06/	16 16:13
Antimony			0.522	mg/L	0.0010	104	70	130			
Arsenic			0.502	mg/L	0.0010	100	70	130			
Barium			0.478	mg/L	0.050	94	70	130			
Beryllium			0.276	mg/L	0.0010	110	70	130			
Cadmium			0.260	mg/L	0.0010	104	70	130			
Chromium			0.494	mg/L	0.0050	99	70	130			
Cobalt			0.483	mg/L	0.0050	97	70	130			
Lead			0.499	mg/L	0.0010	100	70	130			
Molybdenu	m		0.499	mg/L	0.0010	109	70	130			
Selenium	111		0.523	mg/L	0.0010	105	70	130			
Thallium			0.323	mg/L	0.0012	94	70	130			
	B4000405 554555	. 44 =		_							
Lab ID:	B16062493-001BMSI	11 Sa				405	Run: SUB-E		0.4		16 16:18
Antimony			0.523	mg/L	0.0010	105	70	130	0.1	20	
Arsenic			0.512	mg/L	0.0010	103	70	130	2.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: E	3_100518
Lab ID:	B16062493-001BMSI) 11 San	nple Matrix	Spike Duplicate			Run: SUB-	3263404		07/06/	16 16:18
Barium			0.486	mg/L	0.050	96	70	130	1.8	20	
Beryllium			0.282	mg/L	0.0010	113	70	130	2.3	20	
Cadmium			0.265	mg/L	0.0010	106	70	130	1.9	20	
Chromium			0.511	mg/L	0.0050	102	70	130	3.4	20	
Cobalt			0.494	mg/L	0.0050	99	70	130	2.2	20	
Lead			0.520	mg/L	0.0010	104	70	130	3.9	20	
Molybdenu	m		0.546	mg/L	0.0010	109	70	130	0.2	20	
Selenium			0.520	mg/L	0.0012	104	70	130	0.6	20	
Thallium			0.500	mg/L	0.00050	100	70	130	6.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:08/11/16Project:CCRRWork Order:T16060120

Method: Lab ID: Mercury Method:	E245.1										
Mercury	ICV								Analytic	al Run: SUB	-B263296
	-	Initial Cal	libration	Verificati	ion Standard					07/01/	/16 15:49
Method:		0.00	020	mg/L	0.00010	101	90	110			
	E245.1									Batch: B	3_100530
Lab ID:	MB-100530	Method B	Blank				Run: SUB-E	3263296		07/01/	/16 15:54
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-100530	Laborato	ry Conti	rol Sampl	е		Run: SUB-E	3263296		07/01/	/16 15:56
Mercury		0.00	020	mg/L	0.00010	101	85	115			
Lab ID:	B16062389-001BMS	Sample N	∕latrix S	pike			Run: SUB-E	3263296		07/01/	/16 16:02
Mercury		0.00	020	mg/L	0.00010	98	70	130			
Lab ID:	B16062389-001BMSI	Sample N	Иatrix S	pike Dupl	licate		Run: SUB-E	3263296		07/01/	/16 16:04
Mercury		0.00	020	mg/L	0.00010	100	70	130	1.6	30	
Lab ID:	B16062472-001CMS	Sample N	Matrix S	pike			Run: SUB-E	3263296		07/01/	/16 16:36
Mercury		0.00	020	mg/L	0.00010	102	70	130			
Lab ID:	B16062472-001CMSI	Sample N	Matrix S	pike Dupl	licate		Run: SUB-E	3263296		07/01/	/16 16:38
Mercury		0.00	020	mg/L	0.00010	102	70	130	0.8	30	
Method:	E245.1								Analytic	al Run: SUB	-B263366
Lab ID:	ICV	Initial Cal	libration	verificati	ion Standard					07/05/	/16 16:32
Mercury		0.00	022	mg/L	0.00010	110	90	110			
Method:	E245.1									Batch: B	3_100575
Lab ID:	MB-100575	Method E					Run: SUB-E	3263366		07/05/	/16 16:59
Mercury			ND	mg/L	3E-06						
Lab ID:	LCS-100575	Laborato	ry Conti	rol Sampl	е		Run: SUB-E	3263366		07/05/	/16 17:01
Mercury		0.00	022	mg/L	0.00010	108	85	115			
Lab ID:	T16060120-007B	Sample N	Matrix S	pike			Run: SUB-E	3263366		07/05/	/16 17:37
Mercury		0.00	049	mg/L	0.00010	93	70	130			
Lab ID:	T16060120-007B	Sample N	Иatrix S	pike Dupl	licate		Run: SUB-E	3263366		07/05/	/16 17:38
Mercury			048	mg/L	0.00010	88	70	130	2.3	30	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1	_160630A
Lab ID:	ICV/LCS-W-3770	2	nitial Calibratio	on Verification S	tandard					06/30	/16 16:17
Chloride			103	mg/L	2.0	103	90	110			
Sulfate			102	mg/L	2.0	102	90	110			
Method:	E300.0									Batc	h: R68818
Lab ID:	ICB	2 1	Method Blank				Run: IC1_1	60630A		06/30	/16 16:37
Chloride			0.4	mg/L	0.05						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3733	2 L	aboratory For	tified Blank			Run: IC1_1	60630A		06/30	/16 16:56
Chloride			23.7	mg/L	1.0	93	90	110			
Sulfate			23.8	mg/L	1.0	95	90	110			
Lab ID:	T16060120-006AMS	2 8	Sample Matrix	Spike			Run: IC1_1	60630A		06/30	/16 22:07
Chloride			4360	mg/L	50	81	90	110			S
Sulfate			3410	mg/L	50	95	90	110			
- Low spike	e recovery due to matrix into	erference									
Lab ID:	T16060120-006AMSE	2 9	Sample Matrix	Spike Duplicate			Run: IC1_1	60630A		06/30	/16 22:27
Chloride			4400	mg/L	50	83	90	110	8.0	10	S
Sulfate			3470	mg/L	50	99	90	110	1.5	10	

⁻ Low spike recovery due to matrix interference

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-0136
Lab ID:	MB-RA226-0136	3 Me	thod Blank				Run: RAD1	04-CS_160726	6A	08/01/	16 13:23
Total Radio	um as Ra226		0.04	pCi/L							U
Total Radio	um as Ra226 precision	(±)	0.1	pCi/L							
Total Radio	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0136	Lab	oratory Cor	itrol Sample			Run: RAD1	04-CS_160726	6A	08/01/	16 13:23
Radium 22	26		55	pCi/L		102	80	120			
Lab ID:	TapWater1MS	Sar	mple Matrix	Spike			Run: RAD1	04-CS_160726	6A	08/01/	16 13:23
Radium 22	26		100	pCi/L		97	70	130			
Lab ID:	TapWater1MSD	Sar	mple Matrix	Spike Duplicate			Run: RAD1	04-CS_160726	6A	08/01/	16 13:23
Radium 22	26		110	pCi/L		102	70	130	5.4	29.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 08/11/16Project:CCRRWork Order: T16060120

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: C_RA	228-5259
Lab ID: LCS-228-RA226-8160	0 Lal	boratory Cor	ntrol Sample			Run: SUB-0	C213224		07/08	/16 08:26
Radium 228		8.6	pCi/L		95	80	120			
Lab ID: MB-RA226-8160	3 Me	thod Blank				Run: SUB-0	C213224		07/08	/16 08:26
Radium 228		2	pCi/L							
Radium 228 precision (±)		0.9	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C16060982-003AMS	Sa	mple Matrix	Spike			Run: SUB-0	C213224		07/08	/16 08:26
Radium 228		42	pCi/L		117	70	130			
Lab ID: C16060982-003AMSI	D Sa	mple Matrix	Spike Duplicate			Run: SUB-0	C213224		07/08	/16 08:26
Radium 228		46	pCi/L		142	70	130	8.8	47.1	S

⁻ Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD recoveries are acceptable, the response is considered to be matrix related The batch is approved.

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit. S - Spike recovery outside of advisory limits.

Workorder	Sample	Recovery	
T16060120			
	T16060120-001C	94.67%	Ra-228
	T16060120-001C	114.76%	Ra-226
	T16060120-002C	98.76%	Ra-228
	T16060120-002C	106.21%	Ra-226
	T16060120-003C	100.00%	Ra-228
	T16060120-003C	102.52%	Ra-226
	T16060120-004C	95.53%	Ra-228
	T16060120-004C	100.53%	Ra-226
	T16060120-005C	96.45%	Ra-228
	T16060120-005C	115.15%	Ra-226
	T16060120-006C	84.55%	Ra-228
	T16060120-006C	261.36%	Ra-226
	T16060120-007C	102.49%	Ra-228
	T16060120-007C	106.60%	Ra-226
	T16060120-008C	95.56%	Ra-228
	T16060120-008C	96.70%	Ra-226

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Alisha D. Griffin

T16060120

Date Received: 6/23/2016

0 ,				
Reviewed by:	BL2000\ssuchar		Re	ceived by: sas
Reviewed Date:	6/24/2016		Car	rier name: Hand Del
Shipping container/cooler in	good condition?	Yes [√]	No 🖂	Not Present ☐
Shipping container/cooler in	good condition:	ies [V]		Not Flesent
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🗌	Not Present ✓
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗸	No 🗌	
Chain of custody signed who	en relinquished and received?	Yes 🗸	No 🗌	
Chain of custody agrees with	h sample labels?	Yes 🗸	No 🗌	
Samples in proper container	/bottle?	Yes 🗸	No 🗌	
Sample containers intact?		Yes 🗸	No 🗌	
Sufficient sample volume for	r indicated test?	Yes 🗸	No 🗌	
All samples received within I (Exclude analyses that are c such as pH, DO, Res CI, Su	considered field parameters	Yes √	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Applicable
Container/Temp Blank temp	erature:	10.6°C On Ice - Fi	rom Field	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes	No 🗹	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3633), except for sample -006. 15mL of HNO3 (PRESA39) added to sample -006. Initial pH ok. 24hr pH hold needed. Receipt temperature checked with Thermo 1211: read temperature = 10.6°C; no corrections. ADG 160624 11:19

Formats: EDD/EDT(Electronic Data) Format: Collection LEVEL IV Collection Time Time Collection Collectio	MATRIX Scholar Solids Sample Type: Av 8 V 8 D DW Sample Type: Av 8 V 8 D DW Air Waster Soils/Soilds Vegetation Bioassay Other DW - Drinking Water AATRIX Scholar Soils	SEE ATTACHED	Email: Purchase Order: Contact ELI prior to Rush sample submittal for charges and scheduling – See Instruction Page Comments: Comments: Leta, 1210 S Leta Preserv, Tibobol20	Sample DAH Quote/ Quote/ Lo bmittal
MW-7 MW-3 MW-5 MW-6 1511 MW-6 1511 AW-6 1511 AW-6 1511 AW-6 Blank-Time: 1200 Blank-Time: 1200 Blank-Time: 1200 Blank-Time: 1200 Blank-Time: 1200 Blank-Time: 1200 Batter Time: 1200 Sample Disposal: Return to Client: 1100	Signature: Signature: Signature: Received by (print) Received by (print) Received by (print) Received by (print)	S X X X X	Filme:	Signature:

mples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ANALYTICAL SUMMARY REPORT

September 21, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16080082

Project Name: CCRR

6080082 Quote ID: T3094

Energy Laboratories Inc. College Station TX received the following 8 samples for Texas Municipal Power Agency on 8/23/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	e Matrix	Test
T16080082-001	SSP/AP MW-1	08/23/16 10:28 08/23/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP pH Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16080082-002	SSP MW-2	08/23/16 11:25 08/23/16	Groundwater	Same As Above
T16080082-003	SSP MW-3	08/23/16 12:20 08/23/16	Groundwater	Same As Above
T16080082-004	SSP MW-4	08/23/16 13:27 08/23/16	Groundwater	Same As Above
T16080082-007	DUP-1	08/23/16 0:00 08/23/16	Groundwater	Same As Above
T16080082-008	EQBK 8-23	08/23/16 16:24 08/23/16	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:



CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16080082

Report Date: 09/21/16

CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16080082-001 Client Sample ID: SSP/AP MW-1

Report Date: 09/21/16 Collection Date: 08/23/16 10:28 DateReceived: 08/23/16 Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
AGRONOMIC PROPERTIES						
рН	6.7	s.u.	Н	0.1	A4500-H B	08/24/16 14:55 / rda
PHYSICAL PROPERTIES						
Solids, Total Dissolved TDS @ 180 C	6800	mg/L		100	A2540 C	08/24/16 16:15 / rda
MAJOR IONS						
Chloride	1460	mg/L	D	20	E300.0	08/24/16 22:10 / pwh
Fluoride	0.2	mg/L		0.1	A4500-F C	08/25/16 13:34 / pwh
Sulfate	2950	mg/L	D	20	E300.0	08/24/16 22:10 / pwh
Calcium	683	mg/L		1	E200.7	08/25/16 14:28 / jtr
Magnesium	147	mg/L		1	E200.7	08/25/16 14:28 / jtr
Potassium	64	mg/L		1	E200.7	08/25/16 14:28 / jtr
Sodium	1200	mg/L		1	E200.7	08/25/16 14:28 / jtr
Boron	1.0	mg/L	D	0.2	E200.7	08/25/16 14:28 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	08/31/16 14:29 / eli-b
Arsenic	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Barium	0.05	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Beryllium	ND	mg/L		0.001	E200.7	09/01/16 08:30 / eli-b
Cadmium	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Chromium	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Cobalt	ND	mg/L		0.02	E200.8	08/31/16 14:29 / eli-b
Lead	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Lithium	1.2	mg/L		0.01	E200.7	09/01/16 08:30 / eli-b
Molybdenum	ND	mg/L		0.05	E200.8	08/31/16 14:29 / eli-b
Selenium	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
Thallium	ND	mg/L		0.01	E200.8	08/31/16 14:29 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	08/30/16 15:34 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228	1.3	pCi/L	U		RA-05	09/06/16 13:48 / eli-ca
Radium 228 precision (±)	1.1	pCi/L			RA-05	09/06/16 13:48 / eli-ca
Radium 228 MDC	2.1	pCi/L			RA-05	09/06/16 13:48 / eli-ca
Radium 226 + Radium 228	2.92	pCi/L			A7500-RA	09/20/16 00:00 / ajm
Radium 226 + Radium 228 precision (±)	1.18	pCi/L			A7500-RA	09/20/16 00:00 / ajm
Total Radium as Ra226	1.6	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 precision (±)	0.33	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 MDC	0.17	pCi/L			E903.0	09/02/16 10:43 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

 Project:
 CCRR

 Lab ID:
 T16080082-002

Client Sample ID: SSP MW-2

Report Date: 09/21/16

Collection Date: 08/23/16 11:25

DateReceived: 08/23/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
AGRONOMIC PROPERTIES						
				0.4	A 4500 LLD	00/04/40 45:00 /
рН	0.2	s.u.	Н	0.1	A4500-H B	08/24/16 15:00 / rda
PHYSICAL PROPERTIES						
Solids, Total Dissolved TDS @ 180 C	7070	mg/L		100	A2540 C	08/24/16 16:15 / rda
MAJOR IONS						
Chloride	2470	mg/L	D	50	E300.0	08/24/16 23:08 / pwh
Fluoride	0.2	mg/L		0.1	A4500-F C	08/25/16 13:48 / pwh
Sulfate	2070	mg/L	D	50	E300.0	08/24/16 23:08 / pwh
Calcium	838	mg/L		1	E200.7	08/25/16 14:29 / jtr
Magnesium	187	mg/L		1	E200.7	08/25/16 14:29 / jtr
Potassium	72	mg/L		1	E200.7	08/25/16 14:29 / jtr
Sodium	1110	mg/L		1	E200.7	08/25/16 14:29 / jtr
Boron	0.6	mg/L	D	0.2	E200.7	08/25/16 14:29 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	08/31/16 14:32 / eli-b
Arsenic	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Barium	0.04	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Beryllium	0.006	mg/L		0.001	E200.7	09/01/16 08:34 / eli-b
Cadmium	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Chromium	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Cobalt	0.05	mg/L		0.02	E200.8	08/31/16 14:32 / eli-b
Lead	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Lithium	0.8	mg/L		0.01	E200.7	09/01/16 08:34 / eli-b
Molybdenum	ND	mg/L		0.05	E200.8	08/31/16 14:32 / eli-b
Selenium	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
Thallium	ND	mg/L		0.01	E200.8	08/31/16 14:32 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	08/30/16 15:36 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228	1.7	pCi/L			RA-05	09/06/16 13:48 / eli-ca
Radium 228 precision (±)	1.0	pCi/L			RA-05	09/06/16 13:48 / eli-ca
Radium 228 MDC		pCi/L			RA-05	09/06/16 13:48 / eli-ca
Radium 226 + Radium 228	3.11	pCi/L			A7500-RA	09/20/16 00:00 / ajm
Radium 226 + Radium 228 precision (±)	1.05	pCi/L			A7500-RA	09/20/16 00:00 / ajm
Total Radium as Ra226	1.5	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 precision (±)	0.32	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 MDC	0.18	pCi/L			E903.0	09/02/16 10:43 / jjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Matrix: Groundwater

LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: **CCRR** T16080082-003 Lab ID:

Client Sample ID: SSP MW-3

Report Date: 09/21/16 Collection Date: 08/23/16 12:20 DateReceived: 08/23/16

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **AGRONOMIC PROPERTIES** Hq 4.9 s.u. Н 0.1 A4500-H B 08/24/16 15:08 / rda **PHYSICAL PROPERTIES** Solids, Total Dissolved TDS @ 180 C 100 08/24/16 16:15 / rda 6610 mg/L A2540 C **MAJOR IONS** Chloride 1790 mg/L D 20 E300.0 08/25/16 00:07 / pwh 0.8 mg/L Fluoride 0.1 A4500-F C 08/25/16 14:02 / pwh Sulfate D 20 E300.0 08/25/16 00:07 / pwh 2500 mg/L Calcium 693 mg/L 1 E200.7 08/25/16 14:31 / jtr E200.7 08/25/16 14:31 / jtr Magnesium 172 mg/L 1 Potassium 58 mg/L E200.7 08/25/16 14:31 / jtr 1 Sodium 1060 mg/L F200 7 08/25/16 14:31 / jtr 1 Boron 2.9 mg/L D 0.2 E200.7 08/25/16 14:31 / jtr **METALS, TOTAL RECOVERABLE** E200.8 08/31/16 14:34 / eli-b Antimony ND mg/L 0.05 Arsenic ND mg/L 0.01 E200.8 08/31/16 14:34 / eli-b **Barium** 0.05 mg/L 0.01 E200.8 08/31/16 14:34 / eli-b 0.001 E200.7 09/01/16 08:38 / eli-b Beryllium 0.1 mg/L 0.01 Cadmium 0.05 mg/L F2008 08/31/16 14:34 / eli-b Chromium ND mg/L 0.01 F200 8 08/31/16 14:34 / eli-b Cobalt 0.6 mg/L 0.02 E200.8 08/31/16 14:34 / eli-b Lead ND mg/L 0.01 E200.8 08/31/16 14:34 / eli-b 0.6 Lithium mg/L 0.01 E200.7 09/01/16 08:38 / eli-b Molybdenum ND mg/L 0.05 F2008 08/31/16 14:34 / eli-b Selenium ND mg/L 0.01 E200.8 08/31/16 14:34 / eli-b Thallium ND mg/L 0.01 E200.8 08/31/16 14:34 / eli-b **METALS, TOTAL** 0.001 E245.1 08/30/16 15:41 / eli-b Mercury ND mg/L **RADIONUCLIDES - TOTAL** Radium 228 30 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 228 precision (±) 5.7 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 228 MDC 2.1 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 226 + Radium 228 49.8 pCi/L A7500-RA 09/20/16 00:00 / ajm Radium 226 + Radium 228 precision (±) 6.07 pCi/L A7500-RA 09/20/16 00:00 / ajm 20 pCi/L Total Radium as Ra226 E903.0 09/02/16 10:43 / jjc Total Radium as Ra226 precision (±) 2.1 pCi/L E903.0 09/02/16 10:43 / jjc Total Radium as Ra226 MDC 0.19 pCi/L E903.0 09/02/16 10:43 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR **Lab ID:** T16080082-004

Client Sample ID: SSP MW-4

Report Date: 09/21/16

Collection Date: 08/23/16 13:27

DateReceived: 08/23/16

Matrix: Groundwater

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **AGRONOMIC PROPERTIES** Hq 7.1 s.u. Н 0.1 A4500-H B 08/24/16 15:13 / rda **PHYSICAL PROPERTIES** Solids, Total Dissolved TDS @ 180 C 08/24/16 16:16 / rda 3880 mg/L 40 A2540 C **MAJOR IONS** Chloride 1110 mg/L D 20 E300.0 08/25/16 00:26 / pwh 0.1 mg/L Fluoride 0.1 A4500-F C 08/25/16 14:05 / pwh 1140 mg/L Sulfate D 20 E300.0 08/25/16 00:26 / pwh Calcium 395 mg/L 1 E200.7 08/25/16 14:42 / jtr E200.7 08/25/16 14:42 / jtr Magnesium 81 mg/L 1 Potassium 63 mg/L E200.7 08/25/16 14:42 / jtr 1 Sodium 708 mg/L F200 7 08/25/16 14:42 / jtr 1 Boron 1.3 mg/L D 0.2 E200.7 08/25/16 14:42 / jtr METALS, TOTAL RECOVERABLE E200.8 08/31/16 14:37 / eli-b Antimony ND mg/L 0.05 ND mg/L Arsenic 0.01 E200.8 08/31/16 14:37 / eli-b **Barium** 0.04 mg/L 0.01 E200.8 08/31/16 14:37 / eli-b ND 0.001 E200.7 09/01/16 08:42 / eli-b Beryllium mg/L 0.01 Cadmium ND mg/L F2008 08/31/16 14:37 / eli-b Chromium ND mg/L 0.01 F200 8 08/31/16 14:37 / eli-b Cobalt ND mg/L 0.02 E200.8 08/31/16 14:37 / eli-b Lead ND mg/L 0.01 E200.8 08/31/16 14:37 / eli-b Lithium 0.9 mg/L 0.01 E200.7 09/01/16 08:42 / eli-b Molybdenum ND mg/L 0.05 F2008 08/31/16 14:37 / eli-b Selenium ND mg/L 0.01 E200.8 08/31/16 14:37 / eli-b Thallium ND mg/L 0.01 E200.8 08/31/16 14:37 / eli-b **METALS, TOTAL** 0.001 E245.1 08/30/16 15:43 / eli-b Mercury ND mg/L **RADIONUCLIDES - TOTAL** Radium 228 2.7 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 228 precision (±) 1.3 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 228 MDC 1.5 pCi/L **RA-05** 09/06/16 13:48 / eli-ca Radium 226 + Radium 228 6.82 pCi/L A7500-RA 09/20/16 00:00 / ajm Radium 226 + Radium 228 precision (±) 1.41 pCi/L A7500-RA 09/20/16 00:00 / ajm Total Radium as Ra226 4.2 pCi/L E903.0 09/02/16 10:43 / jjc Total Radium as Ra226 precision (±) 0.64 pCi/L E903.0 09/02/16 10:43 / jjc

Report RL - Analyte reporting limit.

Total Radium as Ra226 MDC

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

E903.0

0.20 pCi/L

09/02/16 10:43 / jjc

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16080082-007

Client Sample ID: DUP-1

Report Date: 09/21/16
Collection Date: 08/23/16
DateReceived: 08/23/16

Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	7 1	s.u.	Н	0.1		A4500-H B	08/24/16 15:26 / rda
pri	7.1	S.u.	- 11	0.1		A4300-11 B	00/24/10 13.20 / Ida
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	3900	mg/L		40		A2540 C	08/24/16 16:17 / rda
MAJOR IONS							
Chloride	1170	mg/L	D	20		E300.0	08/25/16 01:25 / pwh
Fluoride		mg/L	Б	0.1		A4500-F C	08/25/16 14:17 / pwh
Sulfate		mg/L	D	20		E300.0	08/25/16 01:25 / pwh
Calcium		mg/L	J	1		E200.7	08/25/16 14:48 / jtr
Magnesium		mg/L		1		E200.7	08/25/16 14:48 / jtr
Potassium		mg/L		1		E200.7	08/25/16 14:48 / jtr
Sodium		mg/L		1		E200.7	08/25/16 14:48 / jtr
Boron		mg/L	D	0.2		E200.7	08/25/16 14:48 / jtr
		Ü					,
METALS, TOTAL RECOVERABLE							
Antimony		mg/L		0.05		E200.8	08/31/16 14:44 / eli-b
Arsenic		mg/L		0.01		E200.8	08/31/16 14:44 / eli-b
Barium		mg/L		0.01		E200.8	08/31/16 14:44 / eli-b
Beryllium		mg/L		0.001		E200.7	09/01/16 09:04 / eli-b
Cadmium		mg/L		0.01		E200.8	08/31/16 14:44 / eli-b
Chromium Cobalt		mg/L		0.01		E200.8	08/31/16 14:44 / eli-b
Lead		mg/L		0.02		E200.8	08/31/16 14:44 / eli-b 08/31/16 14:44 / eli-b
Lead Lithium		mg/L mg/L		0.01 0.01		E200.8 E200.7	09/01/16 09:04 / eli-b
Molybdenum		mg/L		0.01		E200.7 E200.8	08/31/16 14:44 / eli-b
Selenium		mg/L		0.03		E200.8	08/31/16 14:44 / eli-b
Thallium		mg/L		0.01		E200.8	08/31/16 14:44 / eli-b
manam	ND	mg/L		0.01		L200.0	00/01/10 14.44 / 011-0
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/30/16 15:49 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	4.0	pCi/L				RA-05	09/06/16 13:48 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	09/06/16 13:48 / eli-ca
Radium 228 MDC		pCi/L				RA-05	09/06/16 13:48 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	09/20/16 00:00 / ajm
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	09/20/16 00:00 / ajm
Total Radium as Ra226	3.2	pCi/L				E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 precision (±)		pCi/L				E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 MDC	0.17	pCi/L				E903.0	09/02/16 10:43 / jjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Matrix: Groundwater

LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16080082-008 Client Sample ID: EQBK 8-23

Report Date: 09/21/16 Collection Date: 08/23/16 16:24 DateReceived: 08/23/16

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.2	s.u.	Н	0.1		A4500-H B	08/24/16 15:30 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/24/16 16:17 / rda
MAJOR IONS							
Chloride	ND	mg/L		1		E300.0	08/25/16 01:44 / pwh
Fluoride	ND	mg/L		0.1		A4500-F C	08/25/16 14:24 / pwh
Sulfate	ND	mg/L		1		E300.0	08/25/16 01:44 / pwh
Calcium	ND	mg/L		1		E200.7	08/25/16 14:49 / jtr
Magnesium	ND	mg/L		1		E200.7	08/25/16 14:49 / jtr
Potassium	ND	mg/L		1		E200.7	08/25/16 14:49 / jtr
Sodium	ND	mg/L		1		E200.7	08/25/16 14:49 / jtr
Boron	ND	mg/L		0.05		E200.7	08/25/16 14:49 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	08/31/16 15:02 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	08/31/16 15:02 / eli-b
Barium	ND	mg/L		0.01		E200.8	08/31/16 15:02 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	09/01/16 09:21 / eli-b
Cadmium	ND	mg/L		0.01		E200.8	08/31/16 15:02 / eli-b
Chromium	ND	mg/L		0.01		E200.8	08/31/16 15:02 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	08/31/16 15:02 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/07/16 14:42 / eli-b
Lithium	ND	mg/L		0.01		E200.7	09/01/16 09:21 / eli-b
Molybdenum	ND	mg/L		0.05		E200.8	08/31/16 15:02 / eli-b
Selenium	ND	mg/L		0.01		E200.8	08/31/16 15:02 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/07/16 14:42 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/30/16 15:51 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	0.30	pCi/L	U			RA-05	09/06/16 15:24 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	09/06/16 15:24 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	09/06/16 15:24 / eli-ca
Radium 226 + Radium 228	0.338	pCi/L				A7500-RA	09/20/16 00:00 / ajm
Radium 226 + Radium 228 precision (±)	1.25	pCi/L				A7500-RA	09/20/16 00:00 / ajm
Total Radium as Ra226	0.04	pCi/L	U			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 precision (±)	0.12	pCi/L				E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 MDC	0.20	pCi/L				E903.0	09/02/16 10:43 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS	3160824B
Lab ID: MB-1_160824B	Me	ethod Blank				Run: BAL3	_160824C		08/24/	16 16:13
Solids, Total Dissolved TDS @ 180) C	ND	mg/L	5						
Lab ID: LCS-2_160824B	La	boratory Cor	ntrol Sample			Run: BAL3	_160824C		08/24/	16 16:13
Solids, Total Dissolved TDS @ 180) C	1110	mg/L	11	100	90	110			
Lab ID: T16080082-003A DUP	Sa	mple Duplic	ate			Run: BAL3	_160824C		08/24/	16 16:16
Solids, Total Dissolved TDS @ 180	С	6680	mg/L	100				1.1	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1	_160825A
Lab ID:	CCV-F2	Co	ntinuing Cal	ibration Veri	fication Standar	·d				08/25/	/16 15:26
Fluoride			1.97	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch	n: R69456
Lab ID:	LCS-F-3911	Lak	oratory Cor	ntrol Sample			Run: ATT1	_160825A		08/25/	/16 13:21
Fluoride			5.10	mg/L	0.10	100	90	110			
Lab ID:	MBLK	Me	thod Blank				Run: ATT1	_160825A		08/25	/16 13:28
Fluoride			0.02	mg/L	0.002						
Lab ID:	T16080082-001ADUF	P Sai	mple Duplic	ate			Run: ATT1	_160825A		08/25	/16 13:39
Fluoride			0.210	mg/L	0.10				0.0	10	
Lab ID:	T16080082-001AMS	Sai	mple Matrix	Spike			Run: ATT1	_160825A		08/25/	/16 13:42
Fluoride			5.17	mg/L	0.10	97	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B								Analytica	l Run: ATT1_	_160824A
Lab ID:	ICV/LCS-PH-3840	Initia	al Calibratio	n Verificat	tion Standard					08/24/	16 13:01
рН			7.0	s.u.	0.1	100	98	102			
Method:	A4500-H B									Batch	n: R69430
Lab ID:	ICV1-PH12_3890	Initia	al Calibratio	n Verificat	tion Standard		Run: ATT1	_160824A		08/24/	16 12:53
рН			12	s.u.	0.1	100	99	101			
Lab ID:	ICV2-PH2_3594	Initia	al Calibratio	n Verificat	tion Standard		Run: ATT1	_160824A		08/24/	16 12:57
pН			2.0	s.u.	0.1	101	95	105			
Lab ID:	T16080082-002ADUF	P San	nple Duplica	ate			Run: ATT1	_160824A		08/24/	16 15:04
рН			6.2	s.u.	0.1				0.5	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analyti	cal Run:	ICP102-CS	_160825E
Lab ID:	Initial Calib Verif	5 Init	ial Calibratio	on Verification	n Standard					08/25	/16 13:49
Boron			0.981	mg/L	0.050	98	95	105			
Calcium			48.8	mg/L	1.0	98	95	105			
Magnesiun	n		50.3	mg/L	1.0	101	95	105			
Potassium	1		49.9	mg/L	1.0	100	95	105			
Sodium			50.7	mg/L	1.0	101	95	105			
Lab ID:	Cont Calib Blank	5 Co	ntinuing Cal	ibration Blanl	<					08/25	/16 13:51
Boron			0.0127	mg/L	0.050						
Calcium			-0.00680	mg/L	1.0						
Magnesiun	n		0.00633	mg/L	1.0						
Potassium	l		0.00469	mg/L	1.0						
Sodium			0.00335	mg/L	1.0						
Method:	E200.7									Batcl	n: R69457
Lab ID:	IPC	5 Init	ial Precision	and Recove	ry		Run: ICP10	2-CS_160825B		08/25	/16 13:55
Boron			0.970	mg/L	0.050	97	95	105			
Calcium			48.5	mg/L	1.0	97	95	105			
Magnesiun	n		50.4	mg/L	1.0	101	95	105			
Potassium	ı		48.6	mg/L	1.0	97	95	105			
Sodium			49.4	mg/L	1.0	99	95	105			
Lab ID:	LCS-160824	5 Lal	boratory Cor	ntrol Sample			Run: ICP10	2-CS_160825B		08/25	/16 14:00
Calcium			48.8	mg/L	1.0	98	85	115			
Magnesiun	n		50.3	mg/L	1.0	101	85	115			
Potassium	ı		49.0	mg/L	1.0	98	85	115			
Sodium			50.1	mg/L	1.0	100	85	115			
Boron			0.983	mg/L	0.050	97	85	115			
Lab ID:	MB-160824	5 Me	thod Blank				Run: ICP10	2-CS_160825B		08/25	/16 14:02
Calcium			ND	mg/L	0.08						
Magnesiun	n		0.008	mg/L	0.004						
Potassium	l		0.004	mg/L	0.002						
Sodium			ND	mg/L	0.02						
Boron			0.01	mg/L	0.001						
Lab ID:	T16080082-003ASD	5 Se	rial Dilution				Run: ICP10	2-CS_160825B		08/25	/16 14:37
Calcium			712	mg/L	5.0		0	0	2.7	10	
Magnesiun	n		170	mg/L	5.0		0	0	1.0	10	
Potassium	l		51.6	mg/L	5.0		0	0	11	10	R
Sodium			1050	mg/L	5.0		0	0	0.9	10	
Boron			2.87	mg/L	1.2		0	0	1.2	10	
Lab ID:	T16080082-003AMS	5 Sa	mple Matrix	Spike			Run: ICP10	2-CS_160825B		08/25	/16 14:38
Calcium			925	mg/L	1.0	93	70	130			
Magnesiun	n		405	mg/L	1.0	93	70	130			
Potassium			330	mg/L	1.0	109	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	n: R69457
Lab ID:	T16080082-003AMS	5 Sa	mple Matrix	Spike			Run: ICP10	2-CS_160825B		08/25/	16 14:38
Sodium			1290	mg/L	1.0		70	130			Α
Boron			7.79	mg/L	0.25	98	70	130			
Lab ID:	T16080082-003AMSI) 5 Sa	mple Matrix	Spike Duplic	cate		Run: ICP10	2-CS_160825B		08/25/	16 14:40
Calcium			924	mg/L	1.0	92	70	130	0.1	20	
Magnesium	า		404	mg/L	1.0	93	70	130	0.2	20	
Potassium			332	mg/L	1.0	110	70	130	0.4	20	
Sodium			1290	mg/L	1.0		70	130	0.2	20	Α
Boron			7.79	mg/L	0.25	98	70	130	0.0	20	
Method:	E200.7							Analytic	al Run:	ICP102-CS_	_160826C
Lab ID:	Initial Calib Verif	Init	tial Calibratio	on Verification	on Standard					08/26/	16 14:59
Boron			0.978	mg/L	0.050	98	95	105			
Lab ID:	Cont Calib Blank	Co	ntinuing Cal	ibration Blar	nk					08/26/	16 15:01
Boron			0.0215	mg/L	0.050						
Method:	E200.7									Batch	n: R69477
Lab ID:	IPC	Init	tial Precisior	and Recov	ery		Run: ICP10	2-CS_160826C		08/26/	16 15:05
Boron			0.946	mg/L	0.050	95	95	105			
Lab ID:	LCS-160826	La	boratory Co	ntrol Sample	•		Run: ICP10	2-CS 160826C		08/26/	16 15:12
Boron			0.955	mg/L	0.050	93	85	115			
Lab ID:	MB-160826	Me	ethod Blank				Run: ICP10	2-CS_160826C		08/26/	16 15:14
Boron			0.02	mg/L	0.001						
Lab ID:	T16080091-001ASD	Se	rial Dilution				Run: ICP10	2-CS 160826C		08/26/	16 15:21
Boron			0.566	mg/L	0.25		0	0	5.7	10	
Lab ID:	T16080091-001AMS	Sa	mple Matrix	Spike			Run: ICP10	2-CS_160826C		08/26/	16 15:23
Boron			1.52	mg/L	0.050	98	70	130			
Lab ID:	T16080091-001AMSI) Sa	mple Matrix	Spike Duplic	cate		Run: ICP10	2-CS_160826C		08/26/	16 15:32
Boron			1.52	mg/L	0.050	99	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7								Analytic	al Run: SUB	-B266359
Lab ID:	ICV	2 C	ontinuing Cal	ibration Veri	fication Standaı	rd				08/31	/16 09:21
Beryllium			1.23	mg/L	0.010	99	95	105			
Lithium			1.23	mg/L	0.10	98	95	105			
Method:	E200.7									Batch: I	B_102226
Lab ID:	MB-102226	2 M	lethod Blank				Run: SUB-E	3266359		09/01	/16 07:48
Beryllium			ND	mg/L	0.0001						
Lithium			0.004	mg/L	0.002						
Lab ID:	LCS-102226	2 L:	aboratory Cor	ntrol Sample			Run: SUB-E	3266359		09/01	/16 07:52
Beryllium			0.261	mg/L	0.010	104	85	115			
Lithium			0.518	mg/L	0.10	103	85	115			
Lab ID:	B16082684-001CMS	2 S	ample Matrix	Spike			Run: SUB-E	3266359		09/01	/16 08:13
Beryllium			0.262	mg/L	0.0010	105	70	130			
Lithium			0.576	mg/L	0.10	103	70	130			
Lab ID:	B16082684-001CMSI	2 S	ample Matrix	Spike Duplic	cate		Run: SUB-E	3266359		09/01	/16 08:16
Beryllium			0.257	mg/L	0.0010	103	70	130	2.0	20	
Lithium			0.564	mg/L	0.10	100	70	130	2.1	20	
Lab ID:	T16080082-007B	2 S	ample Matrix	Spike			Run: SUB-E	3266359		09/01	/16 09:14
Beryllium			0.252	mg/L	0.0010	101	70	130			
Lithium			1.37	mg/L	0.10	97	70	130			
Lab ID:	T16080082-007B	2 S	ample Matrix	Spike Duplic	cate		Run: SUB-E	3266359		09/01	/16 09:18
Beryllium			0.256	mg/L	0.0010	102	70	130	1.4	20	
Lithium			1.39	mg/L	0.10	101	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B266370
Lab ID:	QCS	10 Initia	al Calibration	on Verificati	on Standard					08/31/	/16 11:25
Antimony			0.0488	mg/L	0.050	98	90	110			
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Barium			0.0507	mg/L	0.10	101	90	110			
Cadmium			0.0246	mg/L	0.0010	98	90	110			
Chromium			0.0502	mg/L	0.010	100	90	110			
Cobalt			0.0503	mg/L	0.010	101	90	110			
Lead			0.0499	mg/L	0.010	100	90	110			
Molybdenu	ım		0.0483	mg/L	0.0050	97	90	110			
Selenium			0.0490	mg/L	0.0050	98	90	110			
Thallium			0.0498	mg/L	0.10	100	90	110			
Method:	E200.8									Batch: I	B_102226
Lab ID:	MB-102226	10 Meth	nod Blank				Run: SUB-	3266370		08/31/	/16 12:24
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Barium			ND	mg/L	9E-05						
Cadmium			ND	mg/L	2E-05						
Chromium			0.0003	mg/L	4E-05						
Cobalt			2E-05	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	ım		ND	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-102226	10 Labo	oratory Co	ntrol Sampl	e		Run: SUB-l	3266370		08/31/	/16 14:04
Antimony			0.495	mg/L	0.0050	99	85	115			
Arsenic			0.489	mg/L	0.0010	98	85	115			
Barium			0.504	mg/L	0.010	101	85	115			
Cadmium			0.254	mg/L	0.0010	102	85	115			
Chromium			0.491	mg/L	0.0010	98	85	115			
Cobalt			0.492	mg/L	0.0010	98	85	115			
Lead			0.496	mg/L	0.0010	99	85	115			
Molybdenu	ım		0.491	mg/L	0.0050	98	85	115			
Selenium			0.484	mg/L	0.0050	97	85	115			
Thallium			0.488	mg/L	0.0010	98	85	115			
Lab ID:	B16082684-001CMS3	10 Sam	nple Matrix	Spike			Run: SUB-I	3266370		08/31/	/16 14:07
Antimony			0.501	mg/L	0.0010	100	70	130			
Arsenic			0.495	mg/L	0.0010	99	70	130			
Barium			0.561	mg/L	0.050	100	70	130			
Cadmium			0.251	mg/L	0.0010	100	70	130			
Chromium			0.488	mg/L	0.0050	97	70	130			
Cobalt			0.477	mg/L	0.0050	95	70	130			
Lead			0.482	mg/L	0.0010	96	70	130			
Molybdenu	ım		0.500	mg/L	0.0010	100	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: I	B_10222
Lab ID:	B16082684-001CMS3	10 Sa	mple Matrix	Spike			Run: SUB-	3266370		08/31/	/16 14:07
Selenium			0.482	mg/L	0.0010	96	70	130			
Thallium			0.476	mg/L	0.00050	95	70	130			
Lab ID:	B16082684-001CMSE	10 Sa	mple Matrix	Spike Duplic	cate		Run: SUB-E	3266370		08/31/	/16 14:09
Antimony			0.507	mg/L	0.0010	101	70	130	1.2	20	
Arsenic			0.495	mg/L	0.0010	99	70	130	0.0	20	
Barium			0.574	mg/L	0.050	102	70	130	2.3	20	
Cadmium			0.251	mg/L	0.0010	100	70	130	0.0	20	
Chromium			0.493	mg/L	0.0050	98	70	130	0.9	20	
Cobalt			0.482	mg/L	0.0050	96	70	130	1.0	20	
Lead			0.490	mg/L	0.0010	98	70	130	1.7	20	
Molybdenu	m		0.507	mg/L	0.0010	101	70	130	1.5	20	
Selenium			0.484	mg/L	0.0010	97	70	130	0.4	20	
Thallium			0.483	mg/L	0.00050	97	70	130	1.5	20	
Lab ID:	T16080082-007B	10 Sa	mple Matrix	Spike			Run: SUB-E	3266370		08/31/	/16 14:54
Antimony			0.510	mg/L	0.0010	102	70	130			
Arsenic			0.502	mg/L	0.0010	100	70	130			
Barium			0.572	mg/L	0.050	106	70	130			
Cadmium			0.261	mg/L	0.0010	104	70	130			
Chromium			0.513	mg/L	0.0050	103	70	130			
Cobalt			0.520	mg/L	0.0050	103	70	130			
Lead			0.513	mg/L	0.0010	103	70	130			
Molybdenui	m		0.500	mg/L	0.0010	100	70	130			
Selenium			0.484	mg/L	0.0021	97	70	130			
Thallium			0.497	mg/L	0.00050	99	70	130			
Lab ID:	T16080082-007B	10 Sa	mple Matrix	Spike Duplic	cate		Run: SUB-E	3266370		08/31/	/16 14:57
Antimony			0.510	mg/L	0.0010	102	70	130	0.2	20	
Arsenic			0.499	mg/L	0.0010	99	70	130	0.6	20	
Barium			0.561	mg/L	0.050	104	70	130	1.9	20	
Cadmium			0.258	mg/L	0.0010	103	70	130	1.0	20	
Chromium			0.498	mg/L	0.0050	100	70	130	2.9	20	
Cobalt			0.504	mg/L	0.0050	100	70	130	3.0	20	
Lead			0.501	mg/L	0.0010	100	70	130	2.5	20	
Molybdenui	m		0.504	mg/L	0.0010	101	70	130	0.7	20	
Selenium			0.479	mg/L	0.0021	96	70	130	0.9	20	
Thallium			0.486	mg/L	0.00050	97	70	130	2.2	20	
Method:	E200.8								Analytic	al Run: SUB	-B26666
Lab ID:	QCS	2 Init	ial Calibrati	on Verificatio	on Standard					09/07/	/16 11:45
Lead			0.0498	mg/L	0.010	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1								Analytic	al Run: SUB	-B266327
Lab ID:	ICV	Initial	Calibratio	on Verification	Standard					08/30/	16 15:04
Mercury			0.0020	mg/L	0.00010	102	90	110			
Method:	E245.1									Batch: I	3_102237
Lab ID:	MB-102237	Metho	d Blank				Run: SUB-E	3266327		08/30/	16 15:30
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-102237	Labora	atory Cor	ntrol Sample			Run: SUB-E	3266327		08/30/	16 15:32
Mercury			0.0020	mg/L	0.00010	98	85	115			
Lab ID:	T16080082-002B	Samp	le Matrix	Spike			Run: SUB-E	3266327		08/30/	16 15:38
Mercury		1	0.0018	mg/L	0.00010	89	70	130			
Lab ID:	T16080082-002B	Samp	le Matrix	Spike Duplica	te		Run: SUB-E	3266327		08/30/	16 15:40
Mercury			0.0018	mg/L	0.00010	88	70	130	0.4	30	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1	_160824A
Lab ID:	ICV/LCS-W-3770	2 Init	ial Calibratio	on Verification St	andard					08/24	/16 17:38
Chloride			99.9	mg/L	2.0	100	90	110			
Sulfate			102	mg/L	2.0	102	90	110			
Method:	E300.0									Batch	n: R69432
Lab ID:	ICB	2 Me	thod Blank				Run: IC1_1	60824A		08/24	/16 17:57
Chloride			0.8	mg/L	0.05						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3911	2 Lal	ooratory For	tified Blank			Run: IC1_1	60824A		08/24	/16 18:17
Chloride			24.0	mg/L	1.0	93	90	110			
Sulfate			24.8	mg/L	1.0	99	90	110			
Lab ID:	T16080082-002AMS	2 Sa	mple Matrix	Spike			Run: IC1_1	60824A		08/24	/16 23:28
Chloride			3660	mg/L	50	95	90	110			
Sulfate			3320	mg/L	50	100	90	110			
Lab ID:	T16080082-002AMSE) 2 Sa	mple Matrix	Spike Duplicate			Run: IC1_1	60824A		08/24	/16 23:47
Chloride			3710	mg/L	50	99	90	110	1.4	10	
Sulfate			3360	mg/L	50	103	90	110	1.3	10	

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-0138
Lab ID:	MB-RA226-0138	3 Met	hod Blank				Run: RAD1	04-CS_160829A		09/02/	16 10:43
Total Radio	um as Ra226		0.0008	pCi/L							U
Total Radio	um as Ra226 precision	(±)	0.1	pCi/L							
Total Radio	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0138	Lab	oratory Cor	itrol Sample			Run: RAD1	04-CS_160829A		09/02/	16 10:43
Total Radio	um as Ra226		55	pCi/L		104	80	120			
Lab ID:	T16080104-002CMS	San	nple Matrix	Spike			Run: RAD1	04-CS_160829A		09/02/	16 10:43
Total Radio	um as Ra226		110	pCi/L		88	70	130			
Lab ID:	T16080104-002CMSE) San	nple Matrix	Spike Duplicate			Run: RAD1	04-CS_160829A		09/02/	16 10:43
Total Radio	um as Ra226		110	pCi/L		87	70	130	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080082

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: C_RA	228-5306
Lab ID: LCS-228-RA228-530)6 La	boratory Cor	ntrol Sample			Run: SUB-0	C214943		09/06/	/16 13:48
Radium 228		8.3	pCi/L		92	80	120			
Lab ID: MB-228-RA228-5300	3 Me	ethod Blank				Run: SUB-0	C214943		09/06/	/16 13:48
Radium 228		0.3	pCi/L							U
Radium 228 precision (±)		0.9	pCi/L							
Radium 228 MDC		2	pCi/L							
Lab ID: C16081088-004BMS	S Sa	mple Matrix	Spike			Run: SUB-0	C214943		09/06/	/16 13:48
Radium 228		20	pCi/L		82	70	130			
Lab ID: C16081088-004BMS	SD Sa	mple Matrix	Spike Duplicate			Run: SUB-0	C214943		09/06/	/16 13:48
Radium 228		21	pCi/L		86	70	130	4.9	53.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Barium Recovery

Per NELAC requirement EL-V1M6-2009 1.7.2.3.c, Energy Laboratories is reporting the sample specific Barium Sulfate carrier recovery.

T16080082	Sample	Recovery	
	T16080082-001C	95.03%	
	T16080082-001C	109.32%	
	T16080082-002C	96.63%	
	T16080082-002C	103.30%	
	T16080082-003C	96.09%	
	T16080082-003C	101.55%	
	T16080082-004C	97.09%	
	T16080082-004C	98.93%	
	T16080082-005C	98.22%	
	T16080082-005C	109.71%	
	T16080082-006C	93.61%	
	T16080082-006C	105.63%	
	T16080082-007C	95.74%	
	T16080082-007C	111.26%	
	T16080082-008C	89.34%	
	T16080082-008C	98.06%	

9/20/2016 4:00:59 PM

T16080082

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by:	Alisha D. Griffin		Date R	Received: 8/23/2016
Reviewed by:	BL2000\ssuchar		Rec	eived by: sas
Reviewed Date:	8/25/2016		Carri	er name: Hand Del
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🗌	Not Present 🔽
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present 🗹
Chain of custody present?		Yes √	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes √	No 🗌	
Chain of custody agrees with	n sample labels?	Yes √	No 🗌	
Samples in proper container	/bottle?	Yes √	No 🗌	
Sample containers intact?		Yes √	No 🗌	
Sufficient sample volume for	indicated test?	Yes √	No 🗌	
All samples received within h (Exclude analyses that are c such as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice - From F	ield	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3931). Receipt temperature checked with Thermo 1210: Cooler #T1106 - read temperature = $0.6^{\circ}C$; no corrections. Cooler #T1070 - read temperature = $0.6^{\circ}C$; no corrections. ADG 160824 11:18

Per Brian G, Wants logged in per history (Schedule 1 & 2 as on COC), but additional analysis of Ca, Mg, Na, K, SO4, Cl. ADG 160824 11:19

ENERGY (3)	hain o	Chain of Custody	ody and A		and Analytical Request Record SE PRINT (Provide as much information as possible.	ecor(ole.)	Page / of 1	, :
Company Name: AMEC Foster	Wheelor		Project Nam	có	Ö	Sa	Sample Origin State:	EPA/State Compliance: Yes □ No □	
			Contact Name:	Barney /	Phonestax: Select	E	Email:	Sampler: (Please Print)	
Invoice Address:			Invoice Con	Invoice Contact & Phone:		Pu	Purchase Order:	Quote/Bottle Order:	
Coopin Donot/Eormate.						Ľ	Contact ELI prior to	is	
special Reportronnats.			Jet.	ANNAIL VSUS	MENUESTIED			DENAM	
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WWTP	EUU/EU I (Electronic Data) Format:		of Con WA : er <u>S</u> oils rinking V	6	TACH	around	Comments:	Receipt Temp	
Other:	NELAC		Jewyper Jewy Jewy Jewy br>Jewy Jewy Jewy Jewy Jewy Jewy Jewy Jewy Jewy	Ta	TA =	THE REAL PROPERTY.	T 1070 =	On Ice: (P) N Custody Seal	
			Samp J	رومالدا	IBS	nebnet	Therm (210, 20		^
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection	Collection	MATRIX	y-s			H correct.	Signature Y N	
SSP/AP MW-1	8/23/16	1028	3	X				100-	
SSP MW-2		1125	-	×				700-	
SSP MW-3		1220		X				M_003	
SSP MW-4		1327		×				400-ISM	
1-Zd db s		1437		.×				S00-28	
" AP PZ-2		1522		×				900-006	
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" Eabk 8-23	>	1624	>	×				100-O	
6									
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Custody Brian Gieselma	w 8/25/16	6 21715	Bin /	Lenh	received by (print).				
Record Relinquished by (print):	Date/Tim			fure:	Received by (print):	Date/Time:	Ime:	Signature:	
Sample Dienocal	Return to Client:		l ab Disposal		Steve Suche	Date/Time: 8/23/16	Ime: 17.5	Signature:	
Cample Disposal.			o do do	od od oom out	attacked to other certified laboratories in order to complete the analysis requested	ri ocirotoro	the stalamore of refer th	a analysis regulasted	
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samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified taboratories in order to compare this serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ANALYTICAL SUMMARY REPORT

September 21, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16080097 Quote ID: T3094

Project Name: CCRR

Energy Laboratories Inc. College Station TX received the following 8 samples for Texas Municipal Power Agency on 8/24/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
T16080097-001	AP MW-3	08/24/16 9:46 08/24/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP pH Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16080097-003	AP MW-1D	08/24/16 12:13 08/24/16	Groundwater	Same As Above
T16080097-004	AP MW-5	08/24/16 14:12 08/24/16	Groundwater	Same As Above
T16080097-005	AP MW-4	08/24/16 14:57 08/24/16	Groundwater	Same As Above
T16080097-007	Dup-2	08/24/16 0:00 08/24/16	Groundwater	Same As Above
T16080097-008	EQBK 8-24	08/24/16 15:18 08/24/16	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:



CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16080097

Report Date: 09/21/16

CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Matrix: Groundwater

LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR T16080097-001 Lab ID:

Client Sample ID: AP MW-3

Report Date: 09/21/16 Collection Date: 08/24/16 09:46 DateReceived: 08/24/16

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **AGRONOMIC PROPERTIES** Hq 6.1 s.u. Н 0.1 A4500-H B 08/26/16 12:07 / rda **PHYSICAL PROPERTIES** Solids, Total Dissolved TDS @ 180 C 08/26/16 09:50 / rda 1400 mg/L 10 A2540 C **MAJOR IONS** Chloride 128 mg/L D 10 E300.0 08/25/16 22:25 / pwh Fluoride 0.2 mg/L 0.1 A4500-F C 08/25/16 14:32 / pwh Sulfate 731 mg/L D 10 E300.0 08/25/16 22:25 / pwh Calcium 123 mg/L 1 E200.7 08/26/16 15:51 / jtr E200.7 08/26/16 15:51 / jtr Magnesium 19 mg/L 1 Potassium 14 mg/L E200.7 08/26/16 15:51 / jtr 1 Sodium 221 mg/L F200 7 08/26/16 15:51 / jtr 1 Boron 3.63 mg/L 0.05 E200.7 08/26/16 15:51 / jtr METALS, TOTAL RECOVERABLE E200.8 09/01/16 13:54 / eli-b Antimony ND mg/L 0.05 Arsenic ND mg/L 0.01 E200.8 09/01/16 13:54 / eli-b **Barium** 0.03 mg/L 0.01 E200.8 09/01/16 13:54 / eli-b 0.003 mg/L 0.001 E200.8 09/01/16 13:54 / eli-b Beryllium 0.01 F2008 Cadmium ND mg/L 09/01/16 13:54 / eli-b 09/01/16 13:54 / eli-b Chromium ND mg/L 0.01 E200.8 Cobalt 0.05 mg/L 0.02 E200.8 09/01/16 13:54 / eli-b Lead ND mg/L 0.01 E200.8 09/01/16 13:54 / eli-b Lithium 0.06 mg/L 0.01 E200.7 09/01/16 17:26 / eli-b Molybdenum ND mg/L 0.05 F2008 09/01/16 13:54 / eli-b Selenium ND mg/L 0.01 E200.8 09/01/16 13:54 / eli-b Thallium ND mg/L 0.01 E200.8 09/01/16 13:54 / eli-b **METALS, TOTAL** 0.001 E245.1 08/31/16 16:33 / eli-b Mercury ND mg/L **RADIONUCLIDES - TOTAL** Radium 228 3.5 pCi/L **RA-05** 09/06/16 10:35 / eli-ca Radium 228 precision (±) 1.0 pCi/L **RA-05** 09/06/16 10:35 / eli-ca Radium 228 MDC 1.4 pCi/L **RA-05** 09/06/16 10:35 / eli-ca Radium 226 + Radium 228 7.54 pCi/L A7500-RA 09/20/16 16:20 / sas Radium 226 + Radium 228 precision (±) 1.19 pCi/L A7500-RA 09/20/16 16:20 / sas 4.0 pCi/L Total Radium as Ra226 E903.0 09/02/16 10:43 / jjc Total Radium as Ra226 precision (±) 0.60 pCi/L E903.0 09/02/16 10:43 / jjc Total Radium as Ra226 MDC 0.19 pCi/L E903.0 09/02/16 10:43 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

CCRR Project: Lab ID: T16080097-003

Client Sample ID: AP MW-1D

Report Date: 09/21/16 Collection Date: 08/24/16 12:13 DateReceived: 08/24/16 Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
AGRONOMIC PROPERTIES						
pH	6.6	s.u.	Н	0.1	A4500-H B	08/26/16 12:20 / rda
•	0.0	o.u.	••	0.1	7110001112	00/20/10 12:20 / 144
PHYSICAL PROPERTIES						00/00/40 00 54 /
Solids, Total Dissolved TDS @ 180 C	1440	mg/L		20	A2540 C	08/26/16 09:51 / rda
MAJOR IONS						
Chloride	221	mg/L	D	10	E300.0	08/25/16 23:42 / pwh
Fluoride	0.7	mg/L		0.1	A4500-F C	08/25/16 14:50 / pwh
Sulfate	621	mg/L	D	10	E300.0	08/25/16 23:42 / pwh
Calcium	78	mg/L		1	E200.7	08/26/16 16:07 / jtr
Magnesium	14	mg/L		1	E200.7	08/26/16 16:07 / jtr
Potassium	15	mg/L		1	E200.7	08/26/16 16:07 / jtr
Sodium	326	mg/L		1	E200.7	08/26/16 16:07 / jtr
Boron	4.81	mg/L		0.05	E200.7	08/26/16 16:07 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	09/01/16 13:59 / eli-b
Arsenic	0.01	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Barium	0.02	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Beryllium	ND	mg/L		0.001	E200.8	09/01/16 13:59 / eli-b
Cadmium	ND	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Chromium	ND	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Cobalt	ND	mg/L		0.02	E200.8	09/01/16 13:59 / eli-b
Lead	ND	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Lithium	0.04	mg/L		0.01	E200.7	09/01/16 18:04 / eli-b
Molybdenum	ND	mg/L		0.05	E200.8	09/01/16 13:59 / eli-b
Selenium	ND	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
Thallium	ND	mg/L		0.01	E200.8	09/01/16 13:59 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	08/31/16 16:41 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228		pCi/L			RA-05	09/06/16 10:35 / eli-ca
Radium 228 precision (±)	0.91	pCi/L			RA-05	09/06/16 10:35 / eli-ca
Radium 228 MDC	1.4	pCi/L			RA-05	09/06/16 10:35 / eli-ca
Radium 226 + Radium 228	3.83	pCi/L			A7500-RA	09/20/16 16:20 / sas
Radium 226 + Radium 228 precision (±)	0.957	pCi/L			A7500-RA	09/20/16 16:20 / sas
Total Radium as Ra226	1.2	pCi/L			E903.0	09/02/16 15:09 / jjc
Total Radium as Ra226 precision (±)		pCi/L			E903.0	09/02/16 15:09 / jjc
Total Radium as Ra226 MDC	0.18	pCi/L			E903.0	09/02/16 15:09 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR **Lab ID**: T16080097-004

Client Sample ID: AP MW-5

Report Date: 09/21/16 **Collection Date:** 08/24/16 14:12 **DateReceived:** 08/24/16

Matrix: Groundwater

Analyses	Popult	Unito	Qualifiere	RL	MCL/ QCL	Method	Analysis Dato / By
Analyses	Result	Units	Qualifiers	KL	QCL	wiethod	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	3.7	s.u.	Н	0.1		A4500-H B	08/26/16 12:23 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	4770	mg/L		40		A2540 C	08/26/16 09:51 / rda
MAJOR IONS							
Chloride	469	mg/L	D	20		E300.0	08/26/16 00:41 / pwh
Fluoride	1.6	mg/L		0.1		A4500-F C	08/25/16 14:57 / pwh
Sulfate	2960	mg/L	D	20		E300.0	08/26/16 00:41 / pwh
Calcium	468	mg/L		1		E200.7	08/26/16 16:12 / jtr
Magnesium	110	mg/L		1		E200.7	08/26/16 16:12 / jtr
Potassium	48	mg/L		1		E200.7	08/26/16 16:12 / jtr
Sodium	663	mg/L		1		E200.7	08/26/16 16:12 / jtr
Boron	3.4	mg/L	D	0.2		E200.7	08/26/16 16:12 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 14:02 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Barium	0.03	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Beryllium	0.09	mg/L		0.001		E200.8	09/01/16 14:02 / eli-b
Cadmium	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Cobalt	0.2	mg/L		0.02		E200.8	09/01/16 14:02 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Lithium	0.6	mg/L		0.01		E200.7	09/01/16 18:08 / eli-b
Molybdenum	ND	mg/L		0.05		E200.8	09/01/16 14:02 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 14:02 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 16:43 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.2	pCi/L	U			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	0.99	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	5.96	pCi/L				A7500-RA	09/20/16 16:20 / sas
Radium 226 + Radium 228 precision (±)	1.20	pCi/L				A7500-RA	09/20/16 16:20 / sas
Total Radium as Ra226	4.8	pCi/L				E903.0	09/02/16 15:09 / jjc
Total Radium as Ra226 precision (±)	0.67	pCi/L				E903.0	09/02/16 15:09 / jjc
Total Radium as Ra226 MDC	0.18	pCi/L				E903.0	09/02/16 15:09 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16080097-005 Client Sample ID: AP MW-4 **Report Date:** 09/21/16 **Collection Date:** 08/24/16 14:57

DateReceived: 08/24/16 **Matrix:** Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
pH	6.5	s.u.	Н	0.1		A4500-H B	08/26/16 12:28 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	4140	mg/L		40		A2540 C	08/26/16 09:51 / rda
MAJOR IONS							
Chloride	485	mg/L	D	20		E300.0	08/26/16 01:00 / pwh
Fluoride	0.1	mg/L		0.1		A4500-F C	08/25/16 15:03 / pwh
Sulfate	2310	mg/L	D	20		E300.0	08/26/16 01:00 / pwh
Calcium	497	mg/L		1		E200.7	08/26/16 16:14 / jtr
Magnesium	115	mg/L		1		E200.7	08/26/16 16:14 / jtr
Potassium	55	mg/L		1		E200.7	08/26/16 16:14 / jtr
Sodium	520	mg/L		1		E200.7	08/26/16 16:14 / jtr
Boron	2.1	mg/L	D	0.2		E200.7	08/26/16 16:14 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 14:04 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Barium	0.03	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	09/01/16 14:04 / eli-b
Cadmium	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	09/01/16 14:04 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Lithium	0.9	mg/L		0.01		E200.7	09/01/16 18:11 / eli-b
Molybdenum	ND	mg/L		0.05		E200.8	09/01/16 14:04 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 14:04 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 16:44 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	0.57	pCi/L	U			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	3.67	pCi/L				A7500-RA	09/20/16 16:20 / sas
Radium 226 + Radium 228 precision (±)	1.15	pCi/L				A7500-RA	09/20/16 16:20 / sas
Total Radium as Ra226	3.1	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	0.51	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.18	pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.D - RL increased due to sample matrix.

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: T16080097-007

Client Sample ID: Dup-2

Report Date: 09/21/16
Collection Date: 08/24/16
DateReceived: 08/24/16
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.7	s.u.	Н	0.1		A4500-H B	08/26/16 12:36 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	1440	mg/L		20		A2540 C	08/26/16 09:52 / rda
MAJOR IONS							
Chloride	223	mg/L	D	10		E300.0	08/26/16 01:39 / pwh
Fluoride	0.6	mg/L		0.1		A4500-F C	08/25/16 15:14 / pwh
Sulfate	623	mg/L	D	10		E300.0	08/26/16 01:39 / pwh
Calcium	79	mg/L		1		E200.7	08/26/16 16:17 / jtr
Magnesium	14	mg/L		1		E200.7	08/26/16 16:17 / jtr
Potassium	14	mg/L		1		E200.7	08/26/16 16:17 / jtr
Sodium	327	mg/L		1		E200.7	08/26/16 16:17 / jtr
Boron	4.8	mg/L	D	0.1		E200.7	08/26/16 16:17 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 14:09 / eli-b
Arsenic	0.01	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Barium	0.03	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	09/01/16 14:09 / eli-b
Cadmium	ND	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	09/01/16 14:09 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Lithium	0.04	mg/L		0.01		E200.7	09/01/16 18:18 / eli-b
Molybdenum	ND	mg/L		0.05		E200.8	09/01/16 14:09 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 14:09 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 16:48 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	2.7	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	4.40	pCi/L				A7500-RA	09/20/16 16:20 / sas
Radium 226 + Radium 228 precision (±)	1.13	pCi/L				A7500-RA	09/20/16 16:20 / sas
Total Radium as Ra226	1.7	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	0.40	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.24	pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16080097-008 Client Sample ID: EQBK 8-24

Report Date: 09/21/16 Collection Date: 08/24/16 15:18 DateReceived: 08/24/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	08/26/16 12:40 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/26/16 09:52 / rda
MAJOR IONS							
Chloride	ND	mg/L		1		E300.0	08/26/16 01:59 / pwh
Fluoride	ND	mg/L		0.1		A4500-F C	08/25/16 15:22 / pwh
Sulfate	ND	mg/L		1		E300.0	08/26/16 01:59 / pwh
Calcium	ND	mg/L		1		E200.7	08/26/16 16:20 / jtr
Magnesium	ND	mg/L		1		E200.7	08/26/16 16:20 / jtr
Potassium	ND	mg/L		1		E200.7	08/26/16 16:20 / jtr
Sodium	ND	mg/L		1		E200.7	08/26/16 16:20 / jtr
Boron	ND	mg/L		0.05		E200.7	08/26/16 16:20 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 14:12 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Barium	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	09/01/16 14:12 / eli-b
Cadmium	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	09/01/16 14:12 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Lithium	ND	mg/L		0.01		E200.7	09/01/16 18:22 / eli-b
Molybdenum	ND	mg/L		0.05		E200.8	09/01/16 14:12 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 14:12 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 16:50 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.0	pCi/L	U			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	0.84	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	1.11	pCi/L				A7500-RA	09/20/16 16:20 / sas
Radium 226 + Radium 228 precision (±)	0.856	pCi/L				A7500-RA	09/20/16 16:20 / sas
Total Radium as Ra226	0.1	pCi/L	U			E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	0.16	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.23	pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS	160826A
Lab ID: MB-1_160826A	M	ethod Blank				Run: BAL3_	_160826B		08/26/	16 09:48
Solids, Total Dissolved TDS @ 1	80 C	ND	mg/L	5						
Lab ID: LCS-2_160826A	La	boratory Cor	itrol Sample	Э		Run: BAL3_	_160826B		08/26/	16 09:48
Solids, Total Dissolved TDS @ 1	80 C	1100	mg/L	11	99	90	110			
Lab ID: T16080097-003A DU	I P Sa	ample Duplica	ate			Run: BAL3_	_160826B		08/26/	16 09:51
Solids, Total Dissolved TDS @ 1	80 C	1440	mg/L	20				0.0	5	
Method: A2540 C									Batch: TDS	160829A
Lab ID: MB-1_160829A	M	ethod Blank				Run: BAL3_	_160829A		08/29/	16 15:23
Solids, Total Dissolved TDS @ 1	80 C	6	mg/L	5						
Lab ID: LCS-2_160829A	La	boratory Cor	ntrol Sample	Э		Run: BAL3_	_160829A		08/29/	16 15:23
Solids, Total Dissolved TDS @ 1	80 C	1120	mg/L	11	100	90	110			
Lab ID: T16080097-006A DU	I P Sa	ample Duplica	ate			Run: BAL3_	_160829A		08/29/	16 15:23
Solids, Total Dissolved TDS @ 1	80 C	4000	mg/L	100				0.0	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1_	_160825A
Lab ID:	CCV-F2	Cor	ntinuing Cal	ibration Verif	ication Standar	d				08/25/	16 15:26
Fluoride			1.97	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch	n: R69456
Lab ID:	LCS-F-3911	Lab	oratory Cor	ntrol Sample			Run: ATT1	_160825A		08/25/	16 13:21
Fluoride			5.10	mg/L	0.10	100	90	110			
Lab ID:	MBLK	Met	thod Blank				Run: ATT1	_160825A		08/25/	16 13:28
Fluoride			0.02	mg/L	0.002						
Lab ID:	T16080097-002ADUF	P Sar	nple Duplic	ate			Run: ATT1	_160825A		08/25/	16 14:42
Fluoride			0.270	mg/L	0.10				0.0	10	
Lab ID:	T16080097-002AMS	Sar	mple Matrix	Spike			Run: ATT1	_160825A		08/25/	16 14:47
Fluoride			5.29	mg/L	0.10	98	90	110			

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B								Analytica	l Run: ATT1_	160826A
Lab ID:	ICV/LCS-PH-3840	Initi	al Calibratio	n Verificat	tion Standard					08/26/	16 09:04
pН			7.0	s.u.	0.1	100	98	102			
Lab ID:	ICV/LCS-PH-3840	Initi	al Calibratio	n Verificat	tion Standard					08/26/	16 12:52
pН			7.0	s.u.	0.1	100	98	102			
Method:	A4500-H B									Batch	: R69474
Lab ID:	ICV1-PH12_3890	Initi	al Calibratio	n Verificat	tion Standard		Run: ATT1	_160826A		08/26/	16 08:58
pН			12	s.u.	0.1	99	99	101			
Lab ID:	ICV2-PH2_3594	Initi	al Calibratio	n Verificat	tion Standard		Run: ATT1	_160826A		08/26/	16 09:00
pН			2.1	s.u.	0.1	105	95	105			
Lab ID:	T16080097-001ADUF	P Sar	mple Duplica	ate			Run: ATT1	_160826A		08/26/	16 12:11
рН			6.0	s.u.	0.1				0.5	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analyti	cal Run:	ICP102-CS	_1608260
Lab ID:	Initial Calib Verif	5 Init	ial Calibratio	on Verification	n Standard					08/26	/16 14:59
Boron			0.978	mg/L	0.050	98	95	105			
Calcium			49.3	mg/L	1.0	99	95	105			
Magnesiur	m		49.8	mg/L	1.0	100	95	105			
Potassium	ı		48.7	mg/L	1.0	97	95	105			
Sodium			48.2	mg/L	1.0	96	95	105			
Lab ID:	Cont Calib Blank	5 Co	ntinuing Cal	ibration Blanl	<					08/26	/16 15:01
Boron			0.0215	mg/L	0.050						
Calcium			0.00341	mg/L	1.0						
Magnesiu	m		0.00135	mg/L	1.0						
Potassium	1		0.00253	mg/L	1.0						
Sodium			0.425	mg/L	1.0						
Method:	E200.7									Batch	n: R69477
Lab ID:	IPC	5 Init	ial Precisior	and Recove	ry		Run: ICP10	2-CS_160826C		08/26	/16 15:05
Boron			0.946	mg/L	0.050	95	95	105			
Calcium			47.3	mg/L	1.0	95	95	105			
Magnesiu	m		48.2	mg/L	1.0	96	95	105			
Potassium	1		47.7	mg/L	1.0	95	95	105			
Sodium			47.3	mg/L	1.0	95	95	105			
Lab ID:	LCS-160826	5 Lab	oratory Cor	ntrol Sample			Run: ICP10	2-CS_160826C		08/26	/16 15:12
Calcium			47.7	mg/L	1.0	95	85	115			
Magnesiu	m		48.2	mg/L	1.0	96	85	115			
Potassium	ı		47.9	mg/L	1.0	96	85	115			
Sodium			46.9	mg/L	1.0	93	85	115			
Boron			0.955	mg/L	0.050	93	85	115			
Lab ID:	MB-160826	5 Me	thod Blank				Run: ICP10	2-CS_160826C		08/26	/16 15:14
Calcium			ND	mg/L	0.09						
Magnesiur	m		0.006	mg/L	0.004						
Potassium	ı		0.003	mg/L	0.002						
Sodium			0.4	mg/L	0.2						
Boron			0.02	mg/L	0.001						
Lab ID:	T16080097-002ASD	5 Sei	rial Dilution				Run: ICP10	2-CS_160826C		08/26	/16 16:01
Calcium			340	mg/L	2.0		0	0	1.4	10	
Magnesiu	m		66.0	mg/L	2.0		0	0	8.0	10	
Potassium	ı		32.9	mg/L	2.0		0	0	14	10	R
Sodium			568	mg/L	2.0		0	0	3.7	10	
Boron			0.381	mg/L	0.50		0	0		10	
Lab ID:	T16080097-002AMS	5 Sai	mple Matrix	Spike			Run: ICP10	2-CS_160826C		08/26	/16 16:03
Calcium			413	mg/L	1.0	77	70	130			
Magnesiu	m		156	mg/L	1.0	89	70	130			
Potassium			147	mg/L	1.0	110	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	: R69477
Lab ID:	T16080097-002AMS	5 Sa	mple Matrix	Spike			Run: ICP10	2-CS_160826C		08/26/	16 16:03
Sodium			674	mg/L	1.0		70	130			Α
Boron			2.27	mg/L	0.10	97	70	130			
Lab ID:	T16080097-002AMSE	5 Sa	mple Matrix	Spike Duplicate			Run: ICP10	2-CS_160826C		08/26/	16 16:05
Calcium			417	mg/L	1.0	82	70	130	1.1	20	
Magnesiun	า		157	mg/L	1.0	90	70	130	0.6	20	
Potassium			147	mg/L	1.0	109	70	130	0.4	20	
Sodium			676	mg/L	1.0		70	130	0.3	20	Α
Boron			2.29	mg/L	0.10	98	70	130	8.0	20	
Method:	E200.7								Analytic	al Run: SUB	B266445
Lab ID:	ICV	Co	ntinuing Cal	ibration Verificati	on Standa	rd				09/01/	16 10:04
Lithium			1.21	mg/L	0.10	97	95	105			
Method:	E200.7									Batch: E	3_102271
Lab ID:	MB-102271	Me	thod Blank				Run: SUB-E	3266445		09/01/	16 17:01
Lithium			0.004	mg/L	0.002						
Lab ID:	LCS-102271	Lat	ooratory Cor	ntrol Sample			Run: SUB-E	3266445		09/01/	16 17:05
Lithium			0.510	mg/L	0.10	101	85	115			
Lab ID:	B16082783-002AMS3	3 Sa	mple Matrix	Spike			Run: SUB-E	3266445		09/01/	16 17:19
Lithium			0.514	mg/L	0.10	101	70	130			
Lab ID:	B16082783-002AMSI	D Sa	mple Matrix	Spike Duplicate			Run: SUB-E	3266445		09/01/	16 17:22
Lithium			0.549	mg/L	0.10	108	70	130	6.6	20	
Lab ID:	B16082814-006BMS	3 Sa	mple Matrix	Spike			Run: SUB-E	3266445		09/01/	16 19:00
Lithium			0.734	mg/L	0.10	102	70	130			
Lab ID:	B16082814-006BMSI	D Sa	mple Matrix	Spike Duplicate			Run: SUB-E	3266445		09/01/	16 19:04
Lithium			0.735	mg/L	0.10	103	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B266449
Lab ID:	QCS	11 Initia	al Calibration	on Verificatio	n Standard					09/01/	16 11:34
Antimony			0.0485	mg/L	0.050	97	90	110			
Arsenic			0.0524	mg/L	0.0050	105	90	110			
Barium			0.0494	mg/L	0.10	99	90	110			
Beryllium			0.0256	mg/L	0.0010	103	90	110			
Cadmium			0.0251	mg/L	0.0010	100	90	110			
Chromium			0.0511	mg/L	0.010	102	90	110			
Cobalt			0.0522	mg/L	0.010	104	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Molybdenu	m		0.0482	mg/L	0.0050	96	90	110			
Selenium			0.0477	mg/L	0.0050	95	90	110			
Thallium			0.0495	mg/L	0.10	99	90	110			
Method:	E200.8									Batch: E	3_102271
Lab ID:	MB-102271	11 Met	hod Blank				Run: SUB-	3266449		09/01/	16 13:41
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Barium			ND	mg/L	9E-05						
Beryllium			ND	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			0.0002	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	ım		ND	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-102271	11 Lab	oratory Co	ntrol Sample			Run: SUB-l	3266449		09/01/	16 14:35
Antimony			0.500	mg/L	0.0050	100	85	115			
Arsenic			0.483	mg/L	0.0010	97	85	115			
Barium			0.488	mg/L	0.010	98	85	115			
Beryllium			0.239	mg/L	0.0010	96	85	115			
Cadmium			0.257	mg/L	0.0010	103	85	115			
Chromium			0.500	mg/L	0.0010	100	85	115			
Cobalt			0.488	mg/L	0.0010	98	85	115			
Lead			0.484	mg/L	0.0010	97	85	115			
Molybdenu	m		0.498	mg/L	0.0050	100	85	115			
Selenium			0.494	mg/L	0.0050	99	85	115			
Thallium			0.459	mg/L	0.0010	92	85	115			
Lab ID:	B16082783-002AMS	3 11 Sam	nple Matrix	Spike			Run: SUB-I	3266449		09/01/	16 14:38
Antimony			0.516	mg/L	0.0010	103	70	130			
Arsenic			0.528	mg/L	0.0010	103	70	130			
Barium			0.526	mg/L	0.050	100	70	130			
Beryllium			0.234	mg/L	0.0010	94	70	130			
Cadmium			0.256	mg/L	0.0010	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch: E	3_102271
Lab ID:	B16082783-002AMS3	11 Sar	mple Matrix	Spike			Run: SUB-E	09/01/	/16 14:38		
Chromium			0.504	mg/L	0.0050	101	70	130			
Cobalt			0.768	mg/L	0.0050	102	70	130			
Lead			0.494	mg/L	0.0010	99	70	130			
Molybdenu	m		0.574	mg/L	0.0010	103	70	130			
Selenium			0.532	mg/L	0.0010	101	70	130			
Thallium			0.473	mg/L	0.00050	94	70	130			
Lab ID:	B16082783-002AMSI) 11 Sar	mple Matrix	Spike Dup	olicate		Run: SUB-E	3266449		09/01/	/16 14:40
Antimony			0.510	mg/L	0.0010	102	70	130	1.1	20	
Arsenic			0.525	mg/L	0.0010	102	70	130	0.5	20	
Barium			0.530	mg/L	0.050	100	70	130	0.6	20	
Beryllium			0.234	mg/L	0.0010	94	70	130	0.1	20	
Cadmium			0.256	mg/L	0.0010	102	70	130	0.0	20	
Chromium			0.512	mg/L	0.0050	102	70	130	1.5	20	
Cobalt			0.767	mg/L	0.0050	102	70	130	0.1	20	
Lead			0.497	mg/L	0.0010	99	70	130	0.7	20	
Molybdenu	m		0.575	mg/L	0.0010	103	70	130	0.3	20	
Selenium			0.538	mg/L	0.0010	102	70	130	1.1	20	
Thallium			0.475	mg/L	0.00050	95	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Prepared by College Station, TX Branch

Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1								Analytic	al Run: SUB	-B266413
Lab ID:	ICV	Initia	al Calibration	on Verificati	ion Standard					08/31/	/16 15:50
Mercury			0.0021	mg/L	0.00010	103	90	110			
Method:	E245.1									Batch: I	3_102294
Lab ID:	MB-102294	Met	hod Blank				Run: SUB-E	3266413		08/31/	/16 16:26
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-102294	Lab	oratory Co	ntrol Sampl	е		Run: SUB-E	B266413		08/31/	/16 16:27
Mercury			0.0020	mg/L	0.00010	100	85	115			
Lab ID:	B16082795-002BMS	San	nple Matrix	Spike			Run: SUB-E	B266413		08/31/	/16 16:37
Mercury			0.0020	mg/L	0.00010	98	70	130			
Lab ID:	B16082795-002BMSI	D San	nple Matrix	Spike Dupl	licate		Run: SUB-E	3266413		08/31/	/16 16:39
Mercury			0.0020	mg/L	0.00010	98	70	130	0.1	30	

Qualifiers:

RL - Analyte reporting limit. MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1	_160825A
Lab ID:	ICV/LCS-W-3770	2 Init	tial Calibratio	on Verification Sta	andard					08/25	/16 18:12
Chloride			101	mg/L	2.0	101	90	110			
Sulfate			101	mg/L	2.0	101	90	110			
Method:	E300.0									Batch	n: R69464
Lab ID:	ICB	2 Me	thod Blank				Run: IC1_1	60825A		08/25	/16 18:31
Chloride			8.0	mg/L	0.05						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3911	2 La	boratory For	tified Blank			Run: IC1_1	60825A		08/25	/16 18:51
Chloride			23.9	mg/L	1.0	93	90	110			
Sulfate			24.6	mg/L	1.0	98	90	110			
Lab ID:	T16080097-003AMS	2 Sa	mple Matrix	Spike			Run: IC1_1	60825A		08/26	/16 00:02
Chloride			477	mg/L	10	103	90	110			
Sulfate			865	mg/L	10	97	90	110			
Lab ID:	T16080097-003AMSE) 2 Sa	mple Matrix	Spike Duplicate			Run: IC1_1	60825A		08/26	/16 00:21
Chloride			481	mg/L	10	104	90	110	8.0	10	
Sulfate			872	mg/L	10	101	90	110	0.9	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-0138
Lab ID:	MB-RA226-0138	3	Method Blank				Run: RAD1	04-CS_160829/	A	09/02	/16 10:43
Total Radio	um as Ra226		0.0008	pCi/L							U
Total Radio	um as Ra226 precision	(±)	0.1	pCi/L							
Total Radio	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0138		Laboratory Cor	ntrol Sample			Run: RAD1	04-CS_160829/	A	09/02	/16 10:43
Total Radio	um as Ra226		55	pCi/L		104	80	120			
Lab ID:	T16080104-002CMS		Sample Matrix	Spike			Run: RAD1	04-CS_160829/	A	09/02	/16 10:43
Total Radio	um as Ra226		110	pCi/L		88	70	130			
Lab ID:	T16080104-002CMSI	D	Sample Matrix	Spike Duplicate			Run: RAD1	04-CS_160829/	A	09/02	/16 10:43
Total Radio	um as Ra226		110	pCi/L		87	70	130	1.1	20	
Method:	E903.0									Batch: RA	226-0139
Lab ID:	MB-RA226-0139	3	Method Blank				Run: RAD1	04-CS_160829I	3	09/02	/16 16:53
Total Radio	um as Ra226		0.06	pCi/L							U
Total Radio	um as Ra226 precision	(±)	0.1	pCi/L							
Total Radio	um as Ra226 MDC		0.2	pCi/L							
Lab ID:	LCS-RA226-0139		Laboratory Cor	ntrol Sample			Run: RAD1	04-CS_160829I	3	09/02	/16 16:53
Total Radio	um as Ra226		55	pCi/L		103	80	120			
Lab ID:	T16080104-001CMS		Sample Matrix	Spike			Run: RAD1	04-CS_160829I	3	09/02	/16 16:53
Total Radio	um as Ra226		110	pCi/L		81	70	130			
Lab ID:	T16080104-001CMSI	D	Sample Matrix	Spike Duplicate			Run: RAD1	04-CS_160829I	3	09/02	/16 16:53
Total Radi	um as Ra226		110	pCi/L		81	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Billings, MT 800.735.4489 • Casper, WY 888.235.0515

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080097

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: C_RA	228-5307
Lab ID: LCS-228-RA228-530)7 La	boratory Cor	ntrol Sample			Run: SUB-0	C214910		09/06/	/16 10:35
Radium 228		8.8	pCi/L		98	80	120			
Lab ID: MB-228-RA228-530	7 3 Me	ethod Blank				Run: SUB-0	C214910		09/06/	/16 10:35
Radium 228		0.2	pCi/L							U
Radium 228 precision (±)		8.0	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C16081142-003CMS	S Sa	mple Matrix	Spike			Run: SUB-0	C214910		09/06/	/16 12:08
Radium 228		22	pCi/L		99	70	130			
Lab ID: C16081142-003CMS	SD Sa	mple Matrix	Spike Duplicate			Run: SUB-0	C214910		09/06/	/16 12:08
Radium 228		25	pCi/L		111	70	130	11	54.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Barium Recovery

Per NELAC requirement EL-V1M6-2009 1.7.2.3.c, Energy Laboratories is reporting the sample specific Barium Sulfate carrier recovery.

T16080097	Sample	Recovery	
	T16080097-001C	92.72%	
	T16080097-001C	101.36%	
	T16080097-002C	93.43%	
	T16080097-002C	106.80%	
	T16080097-003C	91.65%	
	T16080097-003C	100.19%	
	T16080097-004C	96.09%	
	T16080097-004C	104.85%	
	T16080097-005C	98.25%	
	T16080097-005C	101.95%	
	T16080097-006C	102.52%	
	T16080097-006C	105.15%	
	T16080097-007C	71.46%	
	T16080097-007C	90.76%	
	T16080097-008C	76.31%	
	T16080097-008C	95.03%	

9/20/2016 4:07:03 PM

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Alisha D. Griffin

T16080097

Date Received: 8/24/2016

Reviewed by:	BL2000\ssuchar		Red	ceived by: adg
Reviewed Date:	8/29/2016		Carı	rier name: Hand Del
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🗌	Not Present ✓
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed who	en relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	n sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes ✓	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are c such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗸	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice - From F	Field	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes √	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3931). Per Samuel M, log in per history (Schedule 1 & 2 as on COC), but additional analysis of Ca, Mg, Na, K, SO4, Cl. Receipt temperature checked with Thermo 1210: Cooler #T1071 - read temperature = 0.6°C; no corrections. Cooler #T1140 - read temperature = 0.7°C; no corrections. ADG 160824 11:19

Company Name: Compan	Chain of Custody and Analytical Request Record PLEASE PRINT (Provide as much information as possible project Name, PWS, Permit, Etc. MDA GMANG CON CONTROL State Stat	(Provide as much information as possible.) Permit, Etc.	ssible.) Sample Origin State:	Page of EPA/State Compliance: Yes □ No □
Report Mail Address:	Name: Phone	reax Select	Email:	Sampler: (Please Print)
Invoice Address:	Contact & Phone:		Purchase Order:	Quote/Bottle Order:
Special Report/Formats:	ANALYSIS REQUESTED		RUSH sample submittal for charges and	to Shipped by: Hand Cooler ID(s):
□ DW □ EDD/EDT (Electronic Data) □ POTW/WWTP	r of Contained 8. V & W A :9 8. Soils/Solid Tetra Soils Solid Tetra Soils Soils Tetra Soils	TACHED	Scheduling – Sched	
	odmuN qyT əlqms2 s <u>W</u> ¹! <u>A</u> s <u>W</u> ¹! <u>A</u> odestation d - WQ		S TI140 0.1	0.7°C Son Ice: (© N/H) Custody Seal Y (© On Bottle Y (© On Cooler Y () N
SAMPLE IDENTIFICATION Collection (Name, Location, Interval, etc.)	MATRIX	et2	H T16080097	Intact Y N Signature Y N Match
	X B			27
1				NO
4 AP PZ-3 8-97-16 UTIS	< ×			-005 Name
5 AP MW-1D 1213	×			-003
2 AP MW-5 1413	××			-004 -005
8 AP P2-4	X			900-006
	×			TOO-1
print):	Signature:		Date/Time:	Signature:
Record Relinquished by (print): Date/Time:	Signature:		Date/Time:	Signature:
Signed Sample Disposal: Return to Client:	Lab Disposal:	Alisha D. Griffin (Date/Time; 08/24/16 17:34	On Modolang.
1	the state of the s	reported by the salphonestor	oisylana oth otolomoo ot sobro ni oci	palyeis redilleste

9 0

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to comp. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ANALYTICAL SUMMARY REPORT

September 21, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: T16080104

Quote ID: T3094

Project Name: CCRR

Energy Laboratories Inc. College Station TX received the following 7 samples for Texas Municipal Power Agency on 8/25/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
T16080104-001	SFL MW-5	08/25/16 9:52 08/25/16	Groundwater	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride E300.0 Anions Cations by ICP pH Metals Digestion by EPA 200.2 Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
T16080104-002	SFL MW-2	08/25/16 10:45 08/25/16	Groundwater	Same As Above
T16080104-003	SFL MW-4	08/25/16 12:28 08/25/16	Groundwater	Same As Above
T16080104-004	SFL MW-3	08/25/16 13:24 08/25/16	Groundwater	Same As Above
T16080104-006	SFL MW-6	08/25/16 15:22 08/25/16	Groundwater	Same As Above
T16080104-007	EQBK 8-25	08/25/16 16:15 08/25/16	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Report Date: 09/21/16

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: T16080104 CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR **Lab ID**: T16080104-001

Client Sample ID: SFL MW-5

Report Date: 09/21/16

Collection Date: 08/25/16 09:52

DateReceived: 08/25/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
AGRONOMIC PROPERTIES						
рН	5.1	s.u.	Н	0.1	A4500-H	B 08/26/16 13:36 / rda
PHYSICAL PROPERTIES						
Solids, Total Dissolved TDS @ 180 C	7960	mg/L		100	A2540 C	08/29/16 15:26 / pwh
MAJOR IONS						
Chloride	2950	mg/L	D	50	E300.0	09/02/16 22:09 / pwh
Fluoride	0.2	mg/L		0.1	A4500-F	C 08/29/16 10:26 / pwh
Sulfate	2090	mg/L	D	50	E300.0	08/31/16 18:54 / pwh
Calcium	906	mg/L	D	2	E200.7	08/29/16 17:28 / jtr
Magnesium	178	mg/L	D	2	E200.7	08/29/16 17:28 / jtr
Potassium	64	mg/L	D	2	E200.7	08/29/16 17:28 / jtr
Sodium	1590	mg/L	D	2	E200.7	08/29/16 17:28 / jtr
Boron	3.6	mg/L	D	0.5	E200.7	08/29/16 17:28 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	09/01/16 17:14 / eli-b
Arsenic	ND	mg/L		0.01	E200.8	09/01/16 17:14 / eli-b
Barium	0.08	mg/L		0.01	E200.7	09/01/16 19:38 / eli-b
Beryllium	0.01	mg/L		0.001	E200.8	09/01/16 17:14 / eli-b
Cadmium	ND	mg/L		0.01	E200.8	09/01/16 17:14 / eli-b
Chromium	ND	mg/L		0.01	E200.8	09/06/16 18:27 / eli-b
Cobalt	0.06	mg/L		0.02	E200.8	09/06/16 18:27 / eli-b
Lead	ND	mg/L		0.01	E200.8	09/01/16 17:14 / eli-b
ithium	8.0	mg/L	D	0.02	E200.7	09/01/16 19:38 / eli-b
Nolybdenum	ND	mg/L		0.05	E200.7	09/01/16 19:38 / eli-b
Selenium	ND	mg/L		0.01	E200.8	09/01/16 17:14 / eli-b
Thallium	ND	mg/L		0.01	E200.8	09/01/16 17:14 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	08/31/16 16:52 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228	5.9	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.5	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.5	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	25.6	pCi/L			A7500-R	A 09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)	2.52	pCi/L			A7500-R	A 09/20/16 16:42 / sas
otal Radium as Ra226	20	pCi/L			E903.0	09/02/16 16:53 / jjc
otal Radium as Ra226 precision (±)	2.1	pCi/L			E903.0	09/02/16 16:53 / jjc
Гotal Radium as Ra226 MDC	0.16	pCi/L			E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

 Project:
 CCRR

 Lab ID:
 T16080104-002

Client Sample ID: SFL MW-2

Report Date: 09/21/16
Collection Date: 08/25/16 10:45
DateReceived: 08/25/16
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
Analyses	Nesuit	Onito	Qualificis		QUE MICHION	Analysis bate / by
AGRONOMIC PROPERTIES						
pH	6.9	s.u.	Н	0.1	A4500-H B	08/26/16 13:41 / rda
PHYSICAL PROPERTIES						
Solids, Total Dissolved TDS @ 180 C	7680	mg/L		100	A2540 C	08/29/16 15:27 / pwh
MAJOR IONS						
Chloride	2810	mg/L	D	50	E300.0	09/02/16 22:28 / pwh
Fluoride	0.1	mg/L		0.1	A4500-F C	08/29/16 10:44 / pwh
Sulfate	1900	mg/L	D	50	E300.0	08/31/16 19:14 / pwh
Calcium	890	mg/L	D	2	E200.7	08/29/16 17:30 / jtr
Magnesium	141	mg/L	D	2	E200.7	08/29/16 17:30 / jtr
Potassium	51	mg/L	D	2	E200.7	08/29/16 17:30 / jtr
Sodium	1490	mg/L	D	2	E200.7	08/29/16 17:30 / jtr
Boron	0.6	mg/L	D	0.5	E200.7	08/29/16 17:30 / jtr
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	09/01/16 17:16 / eli-b
Arsenic	ND	mg/L		0.01	E200.8	09/01/16 17:16 / eli-b
Barium	0.03	mg/L		0.01	E200.7	09/01/16 19:42 / eli-b
Beryllium	0.002	mg/L		0.001	E200.8	09/01/16 17:16 / eli-b
Cadmium	ND	mg/L		0.01	E200.8	09/01/16 17:16 / eli-b
Chromium	ND	mg/L		0.01	E200.8	09/02/16 15:50 / eli-b
Cobalt	0.02	mg/L		0.02	E200.8	09/12/16 12:59 / eli-b
Lead	ND	mg/L		0.01	E200.8	09/01/16 17:16 / eli-b
Lithium	0.5	mg/L	D	0.02	E200.7	09/01/16 19:42 / eli-b
Molybdenum	ND	mg/L		0.05	E200.7	09/01/16 19:42 / eli-b
Selenium	ND	mg/L		0.01	E200.8	09/01/16 17:16 / eli-b
Thallium	ND	mg/L		0.01	E200.8	09/01/16 17:16 / eli-b
METALS, TOTAL						
Mercury	ND	mg/L		0.001	E245.1	08/31/16 16:58 / eli-b
RADIONUCLIDES - TOTAL						
Radium 228	6.5	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.6	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.5	pCi/L			RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	20.6	pCi/L			A7500-RA	09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)	2.25	pCi/L			A7500-RA	09/20/16 16:42 / sas
Total Radium as Ra226	14	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 precision (±)	1.6	pCi/L			E903.0	09/02/16 10:43 / jjc
Total Radium as Ra226 MDC	0.19	pCi/L			E903.0	09/02/16 10:43 / jjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: **Texas Municipal Power Agency**

CCRR Project: Lab ID: T16080104-003 Client Sample ID: SFL MW-4

Report Date: 09/21/16 Collection Date: 08/25/16 12:28 DateReceived: 08/25/16

Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Н	7.1	s.u.	Н	0.1		A4500-H B	08/26/16 13:45 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	6160	mg/L		100		A2540 C	08/29/16 15:27 / pwh
MAJOR IONS							
Chloride	1680	mg/L	D	20		E300.0	09/02/16 22:48 / pwh
Fluoride	0.3	mg/L		0.1		A4500-F C	08/29/16 10:40 / pwh
Sulfate	2100	mg/L	D	20		E300.0	08/31/16 19:33 / pwh
Calcium	768	mg/L	D	2		E200.7	08/29/16 17:32 / jtr
Magnesium	117	mg/L	D	2		E200.7	08/29/16 17:32 / jtr
Potassium	57	mg/L	D	2		E200.7	08/29/16 17:32 / jtr
Sodium	1070	mg/L	D	2		E200.7	08/29/16 17:32 / jtr
Boron	0.6	mg/L	D	0.5		E200.7	08/29/16 17:32 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 17:19 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 17:19 / eli-b
Barium	0.03	mg/L		0.01		E200.7	09/01/16 19:45 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	09/01/16 19:45 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	09/01/16 19:45 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/02/16 15:53 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	09/12/16 13:01 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 17:19 / eli-b
Lithium	0.5	mg/L	D	0.02		E200.7	09/01/16 19:45 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	09/01/16 19:45 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 17:19 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 17:19 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 17:00 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	0.64	pCi/L	U			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	5.28	pCi/L				A7500-RA	09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	09/20/16 16:42 / sas
Total Radium as Ra226		pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)		pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC		pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR
Lab ID: T16080104-004
Client Sample ID: SFL MW-3

Report Date: 09/21/16

Collection Date: 08/25/16 13:24

DateReceived: 08/25/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	3.9	s.u.	Н	0.1		A4500-H B	08/26/16 13:49 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	5660	mg/L		100		A2540 C	08/29/16 15:27 / pwh
MAJOR IONS							
Chloride	1490	mg/L	D	20		E300.0	09/02/16 23:07 / pwh
Fluoride	0.7	mg/L		0.1		A4500-F C	08/29/16 10:51 / pwh
Sulfate	2210	mg/L	D	20		E300.0	08/31/16 19:53 / pwh
Calcium	666	mg/L	D	2		E200.7	08/29/16 17:33 / jtr
Magnesium	124	mg/L	D	2		E200.7	08/29/16 17:33 / jtr
Potassium	54	mg/L	D	2		E200.7	08/29/16 17:33 / jtr
Sodium	914	mg/L	D	2		E200.7	08/29/16 17:33 / jtr
Boron	2.5	mg/L	D	0.5		E200.7	08/29/16 17:33 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 17:22 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 17:22 / eli-b
Barium	0.06	mg/L		0.01		E200.7	09/01/16 19:49 / eli-b
Beryllium	0.04	mg/L		0.001		E200.7	09/01/16 19:49 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	09/01/16 19:49 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/02/16 15:55 / eli-b
Cobalt	0.07	mg/L		0.02		E200.8	09/12/16 13:04 / eli-b
Lead	0.03	mg/L		0.01		E200.8	09/01/16 17:22 / eli-b
Lithium	0.4	mg/L	D	0.02		E200.7	09/01/16 19:49 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	09/01/16 19:49 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 17:22 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 17:22 / eli-b
METALS, TOTAL							
Mercury	0.003	mg/L		0.001		E245.1	09/01/16 16:11 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	5.3	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	16.6	pCi/L				A7500-RA	09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)	2.03	pCi/L				A7500-RA	09/20/16 16:42 / sas
Total Radium as Ra226	11	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	1.3	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.17	pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

Project: CCRR **Lab ID**: T16080104-006

Client Sample ID: SFL MW-6

Report Date: 09/21/16

Collection Date: 08/25/16 15:22

DateReceived: 08/25/16

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL N	/lethod	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	4.3	s.u.	Н	0.1	Α	4500-H B	08/26/16 14:02 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	8850	mg/L		100	Α	2540 C	08/29/16 15:28 / pwh
MAJOR IONS							
Chloride	3470	mg/L	D	50	Е	300.0	09/02/16 23:46 / pwh
Fluoride	0.8	mg/L		0.1	Α	4500-F C	08/29/16 11:10 / pwh
Sulfate	2240	mg/L	D	50	E	300.0	08/31/16 20:31 / pwh
Calcium	929	mg/L	D	2	E	200.7	08/29/16 17:37 / jtr
Magnesium	245	mg/L	D	2	Е	200.7	08/29/16 17:37 / jtr
Potassium	81	mg/L	D	2	Е	200.7	08/29/16 17:37 / jtr
Sodium	1720	mg/L	D	2	E	200.7	08/29/16 17:37 / jtr
Boron	0.39	mg/L		0.05	E	200.7	09/01/16 13:52 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05	E	200.8	09/01/16 17:27 / eli-b
Arsenic	0.01	mg/L		0.01	Е	200.8	09/01/16 17:27 / eli-b
Barium	0.08	mg/L		0.01	Е	200.7	09/01/16 19:56 / eli-b
Beryllium	0.05	mg/L	D	0.002	Е	200.7	09/01/16 19:56 / eli-b
Cadmium	0.01	mg/L		0.01	E	200.8	09/01/16 17:27 / eli-b
Chromium	ND	mg/L		0.01	E	200.8	09/02/16 16:01 / eli-b
Cobalt	0.1	mg/L		0.02	Е	200.8	09/12/16 13:09 / eli-b
Lead	ND	mg/L		0.01	Е	200.8	09/01/16 17:27 / eli-b
Lithium	8.0	mg/L	D	0.04	Е	200.7	09/01/16 19:56 / eli-b
Molybdenum	ND	mg/L		0.05	Е	200.8	09/01/16 17:27 / eli-b
Selenium	0.01	mg/L		0.01	Е	200.8	09/01/16 17:27 / eli-b
Thallium	ND	mg/L		0.01	E	200.8	09/01/16 17:27 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001	E	245.1	08/31/16 17:05 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	4.5	pCi/L			R	RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.4	pCi/L			R	RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.6	pCi/L			R	RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	28.8	pCi/L			Α	7500-RA	09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)	2.83	pCi/L			Α	7500-RA	09/20/16 16:42 / sas
Total Radium as Ra226	24	pCi/L			E	903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	2.5	pCi/L			E	903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.17	pCi/L			E	903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency

 Project:
 CCRR

 Lab ID:
 T16080104-007

 Client Sample ID:
 EQBK 8-25

Report Date: 09/21/16
Collection Date: 08/25/16 16:15
DateReceived: 08/25/16
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
рН	5.7	s.u.	Н	0.1		A4500-H B	08/26/16 14:06 / rda
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/29/16 15:28 / pwh
MAJOR IONS							
Chloride	ND	mg/L		1		E300.0	09/03/16 00:05 / pwh
Fluoride	ND	mg/L		0.1		A4500-F C	08/29/16 11:17 / pwh
Sulfate	ND	mg/L		1		E300.0	08/31/16 20:51 / pwh
Calcium	ND	mg/L		1		E200.7	08/29/16 17:39 / jtr
Magnesium	ND	mg/L		1		E200.7	08/29/16 17:39 / jtr
Potassium	ND	mg/L		1		E200.7	08/29/16 17:39 / jtr
Sodium	ND	mg/L		1		E200.7	09/01/16 13:54 / jtr
Boron	ND	mg/L		0.05		E200.7	08/29/16 17:39 / jtr
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/01/16 17:29 / eli-b
Arsenic	ND	mg/L		0.01		E200.8	09/01/16 17:29 / eli-b
Barium	ND	mg/L		0.01		E200.7	09/01/16 20:06 / eli-b
Beryllium	ND	mg/L		0.001		E200.7	09/01/16 20:06 / eli-b
Cadmium	ND	mg/L		0.01		E200.7	09/01/16 20:06 / eli-b
Chromium	ND	mg/L		0.01		E200.8	09/02/16 16:03 / eli-b
Cobalt	ND	mg/L		0.02		E200.8	09/12/16 13:12 / eli-b
Lead	ND	mg/L		0.01		E200.8	09/01/16 17:29 / eli-b
Lithium	ND	mg/L		0.01		E200.7	09/13/16 15:19 / eli-b
Molybdenum	ND	mg/L		0.05		E200.7	09/01/16 20:06 / eli-b
Selenium	ND	mg/L		0.01		E200.8	09/01/16 17:29 / eli-b
Thallium	ND	mg/L		0.01		E200.8	09/01/16 17:29 / eli-b
METALS, TOTAL							
Mercury	ND	mg/L		0.001		E245.1	08/31/16 17:07 / eli-b
RADIONUCLIDES - TOTAL							
Radium 228	1.1	pCi/L	U			RA-05	09/06/16 12:08 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	09/06/16 12:08 / eli-ca
Radium 226 + Radium 228	1.23	pCi/L				A7500-RA	09/20/16 16:42 / sas
Radium 226 + Radium 228 precision (±)	1.22	pCi/L				A7500-RA	09/20/16 16:42 / sas
Total Radium as Ra226	0.15	pCi/L	U			E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 precision (±)	0.15	pCi/L				E903.0	09/02/16 16:53 / jjc
Total Radium as Ra226 MDC	0.20	pCi/L				E903.0	09/02/16 16:53 / jjc

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080104

Analyte Co	unt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: TDS	160829A
Lab ID: MB-1_160829A	Method Blank				Run: BAL3_	_160829A		08/29/	16 15:23
Solids, Total Dissolved TDS @ 180 C	6	mg/L	5						
Lab ID: LCS-2_160829A	Laboratory Cor	ntrol Sample			Run: BAL3_	_160829A		08/29/	16 15:23
Solids, Total Dissolved TDS @ 180 C	1120	mg/L	11	100	90	110			
Lab ID: T16080104-002A DUP	Sample Duplic	ate			Run: BAL3_	_160829A		08/29/	16 15:27
Solids, Total Dissolved TDS @ 180 C	7700	mg/L	100				0.3	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C								Analytica	l Run: ATT1_	_160829A
Lab ID:	CCV-F2	Coi	ntinuing Cal	ibration Verit	fication Standaı	rd				08/29/	/16 11:21
Fluoride			1.98	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch	n: R69478
Lab ID:	LCS-F-3911	Lab	oratory Cor	ntrol Sample			Run: ATT1	_160829A		08/29/	/16 10:13
Fluoride			5.29	mg/L	0.10	103	90	110			
Lab ID:	MBLK	Me	thod Blank				Run: ATT1	_160829A		08/29/	/16 10:19
Fluoride			0.02	mg/L	0.002						
Lab ID:	T16080104-001ADUF	S aı	mple Duplic	ate			Run: ATT1	_160829A		08/29/	/16 10:32
Fluoride			0.240	mg/L	0.10				0.0	10	
Lab ID:	T16080104-001AMS	Sar	mple Matrix	Spike			Run: ATT1	_160829A		08/29/	/16 10:35
Fluoride			4.57	mg/L	0.10	85	90	110			S

⁻ Low spike recovery due to matrix interference

RL - Analyte reporting limit. MDC - Minimum detectable concentration ND - Not detected at the reporting limit. S - Spike recovery outside of advisory limits.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B								Analytica	l Run: ATT1_	_160826A
Lab ID:	ICV/LCS-PH-3840	Init	ial Calibratio	n Verificati	on Standard					08/26/	/16 09:04
рН			7.0	s.u.	0.1	100	98	102			
Lab ID:	ICV/LCS-PH-3840	Init	ial Calibratio	n Verificati	on Standard					08/26/	/16 12:52
рН			7.0	s.u.	0.1	100	98	102			
Method:	A4500-H B									Batch	n: R69474
Lab ID:	ICV1-PH12_3890	Init	ial Calibratio	n Verificati	on Standard		Run: ATT1	_160826A		08/26/	/16 08:58
рН			12	s.u.	0.1	99	99	101			
Lab ID:	ICV2-PH2_3594	Init	ial Calibratio	n Verificati	on Standard		Run: ATT1	_160826A		08/26/	/16 09:00
рН			2.1	s.u.	0.1	105	95	105			
Lab ID:	T16080104-004ADUF	S a	mple Duplica	ate			Run: ATT1	_160826A		08/26/	/16 13:53
рН			3.9	s.u.	0.1				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analyt	ical Run:	ICP102-CS	_1608290
Lab ID:	Initial Calib Verif	5 Init	ial Calibratio	on Verification	n Standard					08/29	/16 17:00
Boron			0.993	mg/L	0.050	99	95	105			
Calcium			49.4	mg/L	1.0	99	95	105			
Magnesiur	n		50.6	mg/L	1.0	101	95	105			
Potassium	1		50.8	mg/L	1.0	102	95	105			
Sodium			49.8	mg/L	1.0	100	95	105			
Lab ID:	Cont Calib Blank	5 Co	ntinuing Cal	ibration Blanl	<					08/29	/16 17:02
Boron			0.0217	mg/L	0.050						
Calcium			0.00298	mg/L	1.0						
Magnesiur	n		-0.000326	mg/L	1.0						
Potassium	l		0.00430	mg/L	1.0						
Sodium			0.281	mg/L	1.0						
Method:	E200.7									Batcl	h: R69492
Lab ID:	IPC	5 Init	ial Precision	and Recove	ry		Run: ICP10	2-CS_160829C	;	08/29	/16 17:08
Boron			0.986	mg/L	0.050	99	95	105			
Calcium			50.0	mg/L	1.0	100	95	105			
Magnesiur	n		51.3	mg/L	1.0	103	95	105			
Potassium	l		49.2	mg/L	1.0	98	95	105			
Sodium			50.6	mg/L	1.0	101	95	105			
Lab ID:	LCS-160829	5 Lal	boratory Cor	ntrol Sample			Run: ICP10	2-CS_160829C	;	08/29	/16 17:14
Calcium			50.5	mg/L	1.0	101	85	115			
Magnesiur	n		51.5	mg/L	1.0	103	85	115			
Potassium	ı		50.8	mg/L	1.0	102	85	115			
Sodium			50.6	mg/L	1.0	101	85	115			
Boron			1.01	mg/L	0.050	98	85	115			
Lab ID:	MB-160829	5 Me	thod Blank				Run: ICP10	2-CS_160829C	;	08/29	/16 17:16
Calcium			ND	mg/L	0.08						
Magnesiur	n		ND	mg/L	0.004						
Potassium	ı		ND	mg/L	0.01						
Sodium			0.2	mg/L	0.2						
Boron			0.03	mg/L	0.001						
Lab ID:	T16080082-008ASD	5 Se	rial Dilution				Run: ICP10	2-CS_160829C	;	08/29	/16 17:19
Calcium			ND	mg/L	1.0		0	0		10	
Magnesiur	n		ND	mg/L	1.0		0	0		10	
Potassium	ı		ND	mg/L	1.0		0	0		10	
Sodium			0.926	mg/L	1.0		0	0		10	Ν
Boron			0.0250	mg/L	0.25		0	0		10	N
Lab ID:	T16080082-008AMS	5 Sa	mple Matrix	Spike			Run: ICP10	2-CS_160829C	;	08/29	/16 17:21
Calcium			51.0	mg/L	1.0	102	70	130			
Magnesiur	n		52.2	mg/L	1.0	104	70	130			
Potassium			51.7	mg/L	1.0	103	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	n: R69492
Lab ID:	T16080082-008AMS	5 9	Sample Matrix	Spike			Run: ICP10	2-CS_160829C		08/29	/16 17:21
Sodium			51.6	mg/L	1.0	103	70	130			
Boron			1.09	mg/L	0.050	107	70	130			
Lab ID:	T16080082-008AMSD	5 5	Sample Matrix	Spike Duplicate			Run: ICP10	2-CS_160829C		08/29	/16 17:23
Calcium			51.5	mg/L	1.0	103	70	130	0.9	20	
Magnesiur	n		52.8	mg/L	1.0	106	70	130	1.1	20	
Potassium			52.6	mg/L	1.0	105	70	130	1.7	20	
Sodium			52.2	mg/L	1.0	104	70	130	1.1	20	
Boron			1.10	mg/L	0.050	109	70	130	1.6	20	
Method:	E200.7							Analytic	al Run:	: ICP102-CS	_160901B
Lab ID:	Initial Calib Verif	2	Initial Calibratio	n Verification Sta	andard					09/01	/16 13:38
Boron			0.996	mg/L	0.050	100	95	105			
Sodium			51.0	mg/L	1.0	102	95	105			
Lab ID:	Cont Calib Blank	2 (Continuing Cali	bration Blank						09/01	/16 13:39
Boron			0.00421	mg/L	0.050						
Sodium			0.00284	mg/L	1.0						
Method:	E200.7									Batcl	n: R69562
Lab ID:	IPC	2	Initial Precision	and Recovery			Run: ICP10	2-CS 160901B		09/01	/16 13:43
Boron			0.975	mg/L	0.050	98	95	105			
Sodium			48.7	mg/L	1.0	97	95	105			
Lab ID:	LCS-160831	2 [Laboratory Cor	trol Sample			Run: ICP10	2-CS_160901B		09/01	/16 13:49
Sodium			51.6	mg/L	1.0	103	85	115			
Boron			1.01	mg/L	0.050	101	85	115			
Lab ID:	MB-160831	2	Method Blank				Run: ICP10	2-CS_160901B		09/01	/16 13:50
Sodium			ND	mg/L	0.02						
Boron			0.003	mg/L	0.001						
Lab ID:	T16080104-007ASD	2 9	Serial Dilution				Run: ICP10	2-CS_160901B		09/01	/16 13:56
Sodium			0.206	mg/L	1.0		0	0		10	Ν
Boron			ND	mg/L	0.25		0	0		10	
Lab ID:	T16080104-007AMS	2 9	Sample Matrix	Spike			Run: ICP10	2-CS_160901B		09/01	/16 13:58
Sodium			51.1	mg/L	1.0	102	70	130			
Boron			1.05	mg/L	0.050	105	70	130			
Lab ID:	T16080104-007AMSD	2 9	Sample Matrix	Spike Duplicate			Run: ICP10	2-CS_160901B		09/01	/16 14:03
Sodium			50.7	mg/L	1.0	101	70	130	8.0	20	
Boron			1.05	mg/L	0.050	105	70	130	0.4	20	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7								Analytica	al Run: SUB	-B26644
Lab ID:	ICV	6 Co	ntinuing Ca	ibration Verif	ication Standa	^r d				09/01/	/16 10:04
Barium			2.51	mg/L	0.10	100	95	105			
Beryllium			1.25	mg/L	0.010	100	95	105			
Cadmium			2.45	mg/L	0.010	98	95	105			
Cobalt			2.45	mg/L	0.020	98	95	105			
Lithium			1.21	mg/L	0.10	97	95	105			
Molybdenu	ım		2.46	mg/L	0.10	98	95	105			
Method:	E200.7									Batch: I	B_10227
Lab ID:	MB-102272	6 Me	thod Blank				Run: SUB-E	3266445		09/01/	/16 19:07
Barium			ND	mg/L	0.0003						
Beryllium			ND	mg/L	0.0001						
Cadmium			ND	mg/L	0.0008						
Cobalt			0.005	mg/L	0.001						
Lithium			0.002	mg/L	0.002						
Molybdenu	ım		ND	mg/L	0.004						
Lab ID:	LCS-102272	6 Lat	ooratory Co	ntrol Sample			Run: SUB-	3266445		09/01/	/16 19:11
Barium			0.492	mg/L	0.10	98	85	115			
Beryllium			0.257	mg/L	0.010	103	85	115			
Cadmium			0.256	mg/L	0.010	103	85	115			
Cobalt			0.514	mg/L	0.050	102	85	115			
Lithium			0.522	mg/L	0.10	104	85	115			
Molybdenu	ım		0.503	mg/L	0.10	101	85	115			
Lab ID:	B16082814-007BMS3	3 6 Sa	mple Matrix	Spike			Run: SUB-E	3266445		09/01/	/16 19:31
Barium			0.544	mg/L	0.050	101	70	130			
Beryllium			0.267	mg/L	0.0014	107	70	130			
Cadmium			0.268	mg/L	0.0054	107	70	130			
Cobalt			1.39	mg/L	0.014	108	70	130			
Lithium			0.690	mg/L	0.10	109	70	130			
Molybdenu	ım		1.07	mg/L	0.029	108	70	130			
Lab ID:	B16082814-007BMSE	o 6 Sa	mple Matrix	Spike Duplic	ate		Run: SUB-E	3266445		09/01/	/16 19:35
Barium			0.528	mg/L	0.050	98	70	130	3.0	20	
Beryllium			0.261	mg/L	0.0014	104	70	130	2.1	20	
Cadmium			0.260	mg/L	0.0054	104	70	130	3.0	20	
Cobalt			1.36	mg/L	0.014	102	70	130	2.3	20	
Lithium			0.675	mg/L	0.10	106	70	130	2.2	20	
Molybdenu	ım		1.01	mg/L	0.029	95	70	130	6.1	20	
Method:	E200.7								Analytica	al Run: SUB	-B26695
Lab ID:	ICV	Co	ntinuing Ca	ibration Verif	ication Standa	⁻ d				09/13/	/16 11:00
Lithium			1.28	mg/L	0.10	102	95	105			

Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytica	al Run: SUB	-B266449
Lab ID:	QCS	8 Init	ial Calibratio	on Verificatio	n Standard					09/01/	16 11:34
Antimony			0.0485	mg/L	0.050	97	90	110			
Arsenic			0.0524	mg/L	0.0050	105	90	110			
Beryllium			0.0256	mg/L	0.0010	103	90	110			
Cadmium			0.0251	mg/L	0.0010	100	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Molybdenu	m		0.0482	mg/L	0.0050	96	90	110			
Selenium			0.0477	mg/L	0.0050	95	90	110			
Thallium			0.0495	mg/L	0.10	99	90	110			
Method:	E200.8									Batch: E	3_102272
Lab ID:	MB-102272	8 Me	thod Blank				Run: SUB-E	3266449		09/01/	16 16:55
Antimony			3E-05	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Cadmium			ND	mg/L	2E-05						
Chromium			0.0006	mg/L	4E-05						
Lead			ND	mg/L	2E-05						
Molybdenu	m		ND	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-102272	8 Lab	oratory Cor	ntrol Sample			Run: SUB-E	3266449		09/01/	16 17:32
Antimony			0.496	mg/L	0.0050	99	85	115			
Arsenic			0.530	mg/L	0.0010	106	85	115			
Cadmium			0.275	mg/L	0.0010	110	85	115			
Chromium			0.539	mg/L	0.0010	108	85	115			
Lead			0.490	mg/L	0.0010	98	85	115			
Molybdenu	m		0.492	mg/L	0.0050	98	85	115			
Selenium			0.459	mg/L	0.0050	92	85	115			
Thallium			0.466	mg/L	0.0010	93	85	115			
Lab ID:	B16082814-007BMS3	8 Sai	mple Matrix	Spike			Run: SUB-E	3266449		09/01/	16 17:43
Antimony			0.504	mg/L	0.0010	101	70	130			
Arsenic			0.560	mg/L	0.0010	110	70	130			
Cadmium			0.281	mg/L	0.0010	112	70	130			
Chromium			0.532	mg/L	0.0050	106	70	130			
Lead			0.494	mg/L	0.0010	99	70	130			
Molybdenu	m		1.03	mg/L	0.0010	100	70	130			
Selenium			0.436	mg/L	0.0010	87	70	130			
Thallium			0.465	mg/L	0.00050	93	70	130			
Lab ID:	B16082814-007BMSI	D 8 Sai	mple Matrix	Spike Duplic	cate		Run: SUB-E	3266449		09/01/	16 17:46
Antimony			0.497	mg/L	0.0010	99	70	130	1.2	20	
Arsenic			0.558	mg/L	0.0010	109	70	130	0.4	20	
Cadmium			0.281	mg/L	0.0010	112	70	130	0.1	20	
Chromium			0.532	mg/L	0.0050	106	70	130	0.0	20	

Qualifiers:

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MDC - Minimum detectable concentration

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QA/QC Summary Report

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit Qual
Method:	E200.8									Batch: B_102272
Lab ID:	B16082814-007BMS	D 8 Sa	ample Matrix	Spike Duplicate			Run: SUB-E	3266449		09/01/16 17:46
Lead			0.496	mg/L	0.0010	99	70	130	0.3	20
Molybdenu	m		1.04	mg/L	0.0010	102	70	130	0.9	20
Selenium			0.483	mg/L	0.0010	96	70	130	10	20
Thallium			0.470	mg/L	0.00050	94	70	130	1.1	20

Qualifiers:

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MDC - Minimum detectable concentration

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Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B266526
Lab ID:	QCS	Init	ial Calibratio	on Verificatio	on Standard					09/02/	′16 11:15
Chromium			0.0493	mg/L	0.010	99	90	110			
Method:	E200.8									Batch: E	3_102272
Lab ID:	MB-102272	8 Me	thod Blank				Run: SUB-E	3266526		09/02/	16 14:37
Antimony			0.0001	mg/L	3E-05						
Arsenic			ND	mg/L	0.0001						
Cadmium			ND	mg/L	1E-05						
Chromium			0.0008	mg/L	8E-05						
Lead			9E-05	mg/L	4E-05						
Molybdenu	m		ND	mg/L	4E-05						
Selenium			0.001	mg/L	0.0002						
Thallium			ND	mg/L	1E-05						
Lab ID:	LCS-102272	8 Lab	oratory Co	ntrol Sample			Run: SUB-E	3266526		09/02/	16 16:06
Antimony			0.485	mg/L	0.0050	97	85	115			
Arsenic			0.486	mg/L	0.0010	97	85	115			
Cadmium			0.253	mg/L	0.0010	101	85	115			
Chromium			0.482	mg/L	0.0010	96	85	115			
Lead			0.501	mg/L	0.0010	100	85	115			
Molybdenu	m		0.491	mg/L	0.0050	98	85	115			
Selenium			0.477	mg/L	0.0050	95	85	115			
Thallium			0.495	mg/L	0.0010	99	85	115			
Lab ID:	B16082814-007BMS	3 8 Sar	mple Matrix	Spike			Run: SUB-E	3266526		09/02/	16 16:08
Antimony			0.521	mg/L	0.0010	104	70	130			
Arsenic			0.499	mg/L	0.0010	97	70	130			
Cadmium			0.247	mg/L	0.0010	98	70	130			
Chromium			0.498	mg/L	0.0050	99	70	130			
Lead			0.532	mg/L	0.0010	106	70	130			
Molybdenu	m		1.08	mg/L	0.0010	115	70	130			
Selenium			0.471	mg/L	0.0012	92	70	130			
Thallium			0.520	mg/L	0.00050	104	70	130			
Lab ID:	B16082814-007BMSI	D 8 Sar	mple Matrix	Spike Dupli	cate		Run: SUB-E	3266526		09/02/	16 16:11
Antimony			0.497	mg/L	0.0010	99	70	130	4.7	20	
Arsenic			0.484	mg/L	0.0010	94	70	130	3.1	20	
Cadmium			0.244	mg/L	0.0010	97	70	130	1.2	20	
Chromium			0.478	mg/L	0.0050	95	70	130	4.1	20	
Lead			0.518	mg/L	0.0010	104	70	130	2.7	20	
Molybdenu	m		1.06	mg/L	0.0010	111	70	130	1.7	20	
Selenium			0.460	mg/L	0.0012	90	70	130	2.3	20	
Thallium			0.506	mg/L	0.00050	101	70	130	2.6	20	

Qualifiers:

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Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Analytic	al Run: SUB	-B266607
Lab ID:	QCS	2 Init	tial Calibratio	on Verificatio	n Standard					09/06/	/16 12:07
Chromium			0.0525	mg/L	0.010	105	90	110			
Cobalt			0.0516	mg/L	0.010	103	90	110			
Method:	E200.8									Batch: I	3_102272
Lab ID:	MB-102272	8 Me	thod Blank				Run: SUB-	B266607		09/06/	/16 18:04
Antimony			ND	mg/L	3E-05						
Arsenic			0.0002	mg/L	7E-05						
Cadmium			ND	mg/L	2E-05						
Chromium			0.0007	mg/L	4E-05						
Lead			ND	mg/L	2E-05						
Molybdenu	m		ND	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-102272	8 La	boratory Co	ntrol Sample			Run: SUB-l	B266607		09/06/	/16 18:06
Antimony			0.500	mg/L	0.0050	100	85	115			
Arsenic			0.498	mg/L	0.0010	100	85	115			
Cadmium			0.254	mg/L	0.0010	102	85	115			
Chromium			0.496	mg/L	0.0010	99	85	115			
Lead			0.488	mg/L	0.0010	98	85	115			
Molybdenu	m		0.495	mg/L	0.0050	99	85	115			
Selenium			0.472	mg/L	0.0050	94	85	115			
Thallium			0.475	mg/L	0.0010	95	85	115			
Lab ID:	B16082814-007BMS3	3 8 Sa	mple Matrix	Spike			Run: SUB-l	B266607		09/06/	/16 18:14
Antimony			0.538	mg/L	0.0010	108	70	130		00,00	
Arsenic			0.522	mg/L	0.0010	102	70	130			
Cadmium			0.262	mg/L	0.0010	104	70	130			
Chromium			0.493	mg/L	0.0050	98	70	130			
Lead			0.520	mg/L	0.0010	104	70	130			
Molybdenu	m		1.09	mg/L	0.0010	112	70	130			
Selenium	····		0.471	mg/L	0.0021	94	70	130			
Thallium			0.504	mg/L	0.00050	100	70	130			
Lab ID:	B16082814-007BMSI	D 8 Sa	mple Matrix	Spike Duplic	cate		Run: SUB-l	B266607		09/06/	/16 18:17
Antimony			0.500	mg/L	0.0010	100	70	130	7.3	20	10 10.11
Arsenic			0.504	mg/L	0.0010	99	70	130	3.3	20	
Cadmium			0.252	mg/L	0.0010	100	70	130	3.8	20	
Chromium			0.489	mg/L	0.0010	97	70	130	0.9	20	
Lead			0.495	mg/L	0.0030	99	70	130	4.9	20	
Molybdenu	m		1.02	mg/L	0.0010	99	70	130	6.1	20	
Selenium	111		0.466	mg/L	0.0010	93	70	130	1.1	20	
Thallium			0.479	mg/L	0.00050	95	70	130	5.0	20	

Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



Prepared by College Station, TX Branch

Client: Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080104

										-
Analyte	Co	unt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytic	al Run: SUB	-B266894
Lab ID: QCS		Initial Calibrat	ion Verifica	tion Standard					09/12	/16 14:07
Cobalt		0.0511	mg/L	0.010	102	90	110			
Method: E200.8									Batch:	B_102272
Lab ID: MB-1022	272	10 Method Blank				Run: SUB-	3266894		09/12	/16 12:56
Antimony		ND	mg/L	3E-05						
Arsenic		ND	mg/L	7E-05						
Beryllium		ND	mg/L	9E-06						
Cadmium		ND	mg/L	2E-05						
Chromium		0.0003	mg/L	4E-05						
Cobalt		ND	mg/L	8E-06						
Lead		ND	mg/L	2E-05						
Molybdenum		8E-05	mg/L	3E-05						
Selenium		ND	mg/L	0.0004						
Thallium		7E-05	mg/L	1.0E-05						

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count Res	ult Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit Qual
Method:	E245.1							Analytic	al Run: SUB-B266413
Lab ID:	ICV	Initial Cal	bration Verifica	ation Standard					08/31/16 15:50
Mercury		0.00)21 mg/L	0.00010	103	90	110		
Method:	E245.1								Batch: B_102294
Lab ID:	MB-102294	Method B	lank			Run: SUB-I	B266413		08/31/16 16:26
Mercury			ND mg/L	4E-06					
Lab ID:	LCS-102294	Laborator	y Control Sam	ole		Run: SUB-I	B266413		08/31/16 16:27
Mercury		0.00)20 mg/L	0.00010	100	85	115		
Lab ID:	B16082795-002BMS	Sample N	latrix Spike			Run: SUB-I	B266413		08/31/16 16:37
Mercury		0.00)20 mg/L	0.00010	98	70	130		
Lab ID:	B16082795-002BMSI	D Sample N	latrix Spike Du	plicate		Run: SUB-I	B266413		08/31/16 16:39
Mercury		0.00)20 mg/L	0.00010	98	70	130	0.1	30
Lab ID:	T16080104-007B	Sample N	latrix Spike			Run: SUB-I	B266413		08/31/16 17:09
Mercury		0.00)20 mg/L	0.00010	102	70	130		
Lab ID:	T16080104-007B	Sample N	latrix Spike Du	plicate		Run: SUB-I	B266413		08/31/16 17:11
Mercury		0.00)21 mg/L	0.00010	104	70	130	1.7	30
Method:	E245.1							Analytic	al Run: SUB-B266483
Lab ID:	ICV	Initial Cal	bration Verifica	ation Standard					09/01/16 15:23
Mercury		0.00)21 mg/L	0.00010	103	90	110		
Method:	E245.1								Batch: B_102317
Lab ID:	MB-102317	Method B	lank			Run: SUB-I	B266483		09/01/16 16:07
Mercury			ND mg/L	4E-06					
Lab ID:	LCS-102317	Laborator	y Control Sam	ole		Run: SUB-I	B266483		09/01/16 16:09
Mercury		0.00)20 mg/L	0.00010	100	85	115		
Lab ID:	B16082972-001BMS	Sample N	latrix Spike			Run: SUB-I	B266483		09/01/16 16:16
Mercury		0.002	210 mg/L	0.00010	105	70	130		
Lab ID:	B16082972-001BMSI	D Sample N	latrix Spike Du	plicate		Run: SUB-l	B266483		09/01/16 16:18
Mercury		0.002	207 mg/L	0.00010	103	70	130	1.6	30

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date: 09/21/16Project:CCRRWork Order: T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analytic	cal Run: IC1_	160831A
Lab ID:	ICV/LCS-W-3770	Init	ial Calibratio	on Verificat	tion Standard					08/31/	16 15:59
Sulfate			97.5	mg/L	2.0	98	90	110			
Lab ID:	ICB2	Init	ial Calibratio	on Blank, I	nstrument Blank					08/31/	16 17:17
Sulfate			ND	mg/L	1.0		0	0			
Method:	E300.0									Batch	: R69556
Lab ID:	ICB	Me	thod Blank				Run: IC1_1	60831A		08/31/	16 16:19
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB-3911	Lal	boratory For	tified Blanl	k		Run: IC1_1	60831A		08/31/	16 16:38
Sulfate			22.9	mg/L	1.0	92	90	110			
Lab ID:	LFBD-3911	Lal	boratory For	tified Blanl	k Duplicate		Run: IC1_1	60831A		08/31/	16 16:58
Sulfate			22.6	mg/L	1.0	90	90	110	1.6	10	
Lab ID:	T16080115-001AMS	Sa	mple Matrix	Spike			Run: IC1_1	60831A		08/31/	16 17:56
Sulfate			3380	mg/L	25		90	110			Α
Lab ID:	T16080115-001AMSI	D Sa	mple Matrix	Spike Dup	olicate		Run: IC1_1	60831A		08/31/	16 18:15
Sulfate			3420	mg/L	25		90	110	1.2	10	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0								Analyti	cal Run: IC1_	_160902A
Lab ID:	ICV/LCS-W-3770	Initi	al Calibration	on Verification	n Standard					09/02/	/16 18:54
Chloride			99.2	mg/L	2.0	99	90	110			
Lab ID:	ICB2	Initi	al Calibration	on Blank, Inst	rument Blank					09/02	/16 20:12
Chloride			0.413	mg/L	1.0		0	0			
Method:	E300.0									Batch	n: R69586
Lab ID:	ICB	Met	thod Blank				Run: IC1_1	60902A		09/02	/16 19:14
Chloride			0.4	mg/L	0.05						
Lab ID:	LFB-3911	Lab	oratory For	tified Blank			Run: IC1_1	60902A		09/02/	/16 19:33
Chloride			24.4	mg/L	1.0	96	90	110			
Lab ID:	LFBD-3911	Lab	oratory For	tified Blank D	uplicate		Run: IC1_1	60902A		09/02/	/16 19:53
Chloride			24.4	mg/L	1.0	96	90	110	0.0	10	
Lab ID:	T16080115-001AMS	Sar	mple Matrix	Spike			Run: IC1_1	60902A		09/02/	/16 20:51
Chloride			1260	mg/L	25	104	90	110			
Lab ID:	T16080115-001AMSI	D Sar	mple Matrix	Spike Duplic	ate		Run: IC1_1	60902A		09/02/	/16 21:10
Chloride			1260	mg/L	25	104	90	110	0.1	10	
Lab ID:	T16080117-001AMS	Sar	nple Matrix	Spike			Run: IC1_1	60902A		09/03/	/16 01:23
Chloride			949	mg/L	25	101	90	110			
Lab ID:	T16080117-001AMSI	D Sar	nple Matrix	Spike Duplic	ate		Run: IC1_1	60902A		09/03/	/16 01:43
Chloride			964	mg/L	25	104	90	110	1.6	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by College Station, TX Branch

Texas Municipal Power Agency **Report Date:** 09/21/16 Project: CCRR Work Order: T16080104

Analyte		Count	t Result	Units	RL	%REC	Low Limit	High I	_imit	RPD	RPDLimit	Qual
Method:	E903.0										Batch: RA	226-0138
Lab ID:	MB-RA226-0138	3	Method Blank				Run: RAD1	04-CS_	160829A		09/02	/16 10:43
Total Radi	um as Ra226		0.0008	pCi/L								U
Total Radi	um as Ra226 precision	(±)	0.1	pCi/L								
Total Radi	um as Ra226 MDC		0.2	pCi/L								
Lab ID:	LCS-RA226-0138		Laboratory Cor	ntrol Sample			Run: RAD1	04-CS_	160829A		09/02	/16 10:43
Total Radi	um as Ra226		55	pCi/L		104	80		120			
Lab ID:	T16080104-002CMS		Sample Matrix	Spike			Run: RAD1	04-CS_	160829A		09/02	/16 10:43
Total Radi	um as Ra226		110	pCi/L		88	70		130			
Lab ID:	T16080104-002CMSI)	Sample Matrix	Spike Duplicate			Run: RAD1	04-CS_	160829A		09/02	/16 10:43
Total Radi	um as Ra226		110	pCi/L		87	70		130	1.1	20	
Method:	E903.0										Batch: RA	226-0139
Lab ID:	MB-RA226-0139	3	Method Blank				Run: RAD1	04-CS_	160829B		09/02	/16 16:53
Total Radi	um as Ra226		0.06	pCi/L								U
Total Radi	um as Ra226 precision	(±)	0.1	pCi/L								
Total Radi	um as Ra226 MDC		0.2	pCi/L								
Lab ID:	LCS-RA226-0139		Laboratory Cor	ntrol Sample			Run: RAD1	04-CS_	160829B		09/02	/16 16:53
Total Radi	um as Ra226		55	pCi/L		103	80		120			
Lab ID:	T16080104-001CMS		Sample Matrix	Spike			Run: RAD1	04-CS_	160829B		09/02	/16 16:53
Total Radi	um as Ra226		110	pCi/L		81	70		130			
Lab ID:	T16080104-001CMS)	Sample Matrix	Spike Duplicate			Run: RAD1	04-CS_	160829B		09/02	/16 16:53
Total Radi	um as Ra226		110	pCi/L		81	70		130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by College Station, TX Branch

Client:Texas Municipal Power AgencyReport Date:09/21/16Project:CCRRWork Order:T16080104

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: C_RA	228-5307
Lab ID:	LCS-228-RA228-5307	' Lab	oratory Cor	ntrol Sample			Run: SUB-	C214910		09/06	/16 10:35
Radium 22	28		8.8	pCi/L		98	80	120			
Lab ID:	MB-228-RA228-5307	3 Me	thod Blank				Run: SUB-	C214910		09/06	/16 10:35
Radium 22	28		0.2	pCi/L							U
Radium 22	28 precision (±)		8.0	pCi/L							
Radium 22	28 MDC		1	pCi/L							
Lab ID:	C16081142-003CMS	Sar	mple Matrix	Spike			Run: SUB-	C214910		09/06	/16 12:08
Radium 22	28		22	pCi/L		99	70	130			
Lab ID:	C16081142-003CMSI) Sar	mple Matrix	Spike Duplicate			Run: SUB-	C214910		09/06	/16 12:08
Radium 22	28		25	pCi/L		111	70	130	11	54.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Barium Recovery

Per NELAC requirement EL-V1M6-2009 1.7.2.3.c, Energy Laboratories is reporting the sample specific Barium Sulfate carrier recovery.

T16080104	Sample	Recovery	
	T16080104-001C	97.34%	
	T16080104-001C	106.80%	
	T16080104-002C	100.53%	
	T16080104-002C	101.94%	
	T16080104-003C	80.46%	
	T16080104-003C	105.05%	
	T16080104-004C	99.64%	
	T16080104-004C	101.75%	
	T16080104-005C	99.11%	
	T16080104-005C	102.72%	
	T16080104-006C	92.36%	
	T16080104-006C	103.69%	
	T16080104-007C	88.93%	
	T16080104-007C	93.07%	

9/20/2016 4:09:02 PM

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Alisha D. Griffin

T16080104

Date Received: 8/25/2016

J ,				
Reviewed by:	BL2000\ssuchar		Red	ceived by: trr
Reviewed Date:	8/30/2016		Car	rier name: Hand Del
Shipping container/cooler in	good condition?	Yes √	No 🗍	Not Present ☐
Custody seals intact on all st	nipping container(s)/cooler(s)?	Yes	No 🗌	Not Present ✓
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes √	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🔽	No 🗌	
Chain of custody agrees with	n sample labels?	Yes 🔽	No 🗌	
Samples in proper container	/bottle?	Yes 🗹	No 🗌	
Sample containers intact?		Yes 🗹	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🗹	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice - From F	ield	
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes 🔽	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

pH check of applicable preserved fractions acceptable (Lot#3931). Per BG, log in per history (Schedule 1 & 2 as on COC), but additional analysis of Ca, Mg, Na, K, SO4, Cl. Receipt temperature checked with Thermo 1210: Cooler #R/W - read temperature = 1.2°C; no corrections. Cooler #T10920 - read temperature = 0.7°C; no corrections. ADG 160826 09:39

ENERGY (E)	Chain	of Custo	ody and A	d Analytic	Chain of Custody and Analytical Request Record	Rec	ord		Page of	
Company Name:	•		Project Nam	S	C.	200	Sample	Sample Origin	EPA/State Compliance:	
Oster	Wheeler		TMP	ZA A			State:		Yes No	
Report Mail Address:			Contact Name:		Phone/Fax:		Email:		Sampler: (Please Print)	
		Section 1	Greg Seit	seifert	512-241-2310	310			BG/SM	
Invoice Address:			Invoice Conf	Invoice Contact & Phone:			Purcha	Purchase Order:	Quote/Bottle Order:	
Special Report/Formats:			MC	AMALYSIS	REQUESTED		1	Contact ELI prior to RUSH sample submittal	shipped by:	
	יי, דמם/ממח		say Othe Say Othe Say Othe			THE RESIDENCE OF	æ	for charges and scheduling – See Instruction Page		
POTWWWTP State:	Format:		r of Cor e: A W t ter <u>S</u> oils ninking h	C \$		and the same of)	Comments:	10 Receipt Temp	
Other:	NELAC		edmuM eqyT əlqm e <u>W</u> ii <u>A</u> oifstəgə <u>V</u> O - WO			EE AT	S	No corrections R/W = 1.8	Custody Seal	ZE
	AND DESCRIPTION OF THE PERSON	Contraction of the Contraction o	Sa	hedi		-	3	1098= 0.	7	-
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection	Collection	MATRIX	25		3		T16080104	*	Z
SFL MW-5	8/25/16	0952	3						100-	
2 SFL MW-2	-	1045							7-005	
SFL MW-4		1228							-003	
5FL MW-3		1324							500- ISM	
SFL MW-1		1435								
SFL MW-6		1523						2nd 2-1 only 1/3 full		
FABK 8-25	>	1615	>	>					-	
8 0									<u>40</u> @	
10										
>	Max 8/25/16	80716 9	Signature:	ure: Starely	Received by (print):		Date/Time:		Signature:	
Record Relinquished by (print):				ure;	Received by (print):		Date/Time:		Signature:	
Signed Sample Disposal:	Return to Client:		Lab Disposal:	al:	Received by Laboratory:	gen !	Pate/Time:	116 1708	Signifure:	P
3		L 01 P 01	ociao toronto I	odio od nom on	Collitation and to at both	inchorada	I in ord	and of a		1

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratoriés in order to complete the analysis requested.

This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ANALYTICAL SUMMARY REPORT

November 14, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B16101433

Quote ID: B3997 - CCRR

Project Name: TMPA

Energy Laboratories Inc Billings MT received the following 9 samples for Texas Municipal Power Agency on 10/19/2016 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B16101433-001	SSP/AP MW-1	10/17/16 17:\$	37 10/19/16	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B16101433-002	SSP MW-2	10/18/16 9:12	2 10/19/16	Ground Water	Same As Above
B16101433-003	SSP MW-3	10/18/16 10:2	23 10/19/16	Ground Water	Same As Above
B16101433-004	SSP MW-4	10/18/16 11:2	21 10/19/16	Ground Water	Same As Above
B16101433-005	EQBK-101816	10/18/16 12:3	30 10/19/16	Ground Water	Same As Above
B16101433-006	AP MW-4	10/18/16 13:5	54 10/19/16	Ground Water	Same As Above
B16101433-007	AP MW-5	10/18/16 14:4	18 10/19/16	Ground Water	Same As Above
B16101433-008	DUP-1	10/18/16 0:00	0 10/19/16	Ground Water	Same As Above
B16101433-009	AP MW-1D	10/18/16 15:3	38 10/19/16	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 11/14/16

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CLIENT: Texas Municipal Power Agency

Project: TMPA

Work Order: B16101433 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **TMPA**

Lab ID: B16101433-001 Client Sample ID: SSP/AP MW-1

Report Date: 11/14/16 Collection Date: 10/17/16 17:37 DateReceived: 10/19/16

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
pH	6.2	s.u.	Н	0.1	A4500-H B	10/19/16 13:48 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100	A2540 C	10/20/16 10:00 / jef
_		J				,
INORGANICS	4=40		_		=	10/04/10 07 10 /
Chloride		mg/L	D	6	E300.0	10/21/16 05:42 / mej
Sulfate		mg/L	D	20	E300.0	10/21/16 05:42 / mej
Fluoride	0.2	mg/L		0.1	A4500-F C	10/20/16 14:21 / cjm
CATIONS						
Calcium	673	mg/L		1	E200.7	10/21/16 20:57 / rlh
Magnesium	147	mg/L		1	E200.7	10/21/16 20:57 / rlh
Potassium	51	mg/L		1	E200.7	10/21/16 20:57 / rlh
Sodium	1260	mg/L	D	4	E200.7	10/21/16 20:57 / rlh
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/21/16 19:24 / jpv
Arsenic	0.01	mg/L		0.01	E200.8	10/21/16 19:24 / jpv
Barium	ND	mg/L		0.1	E200.7	10/21/16 20:57 / rlh
Beryllium	ND	mg/L		0.001	E200.8	10/21/16 19:24 / jpv
Boron	0.93	mg/L		0.05	E200.7	10/21/16 20:57 / rlh
Cadmium	ND	mg/L		0.01	E200.8	10/21/16 19:24 / jpv
Chromium		mg/L		0.01	E200.8	10/21/16 19:24 / jpv
Cobalt		mg/L		0.02	E200.8	10/21/16 19:24 / jpv
Lead		mg/L		0.01	E200.8	10/21/16 19:24 / jpv
Lithium		mg/L	D	0.02	E200.7	10/21/16 20:57 / rlh
Mercury		mg/L		0.001	E245.1	10/20/16 11:40 / mas
Molybdenum		mg/L		0.05	E200.8	10/21/16 19:24 / jpv
Selenium		mg/L		0.01	E200.8	10/21/16 19:24 / jpv
Thallium	ND	mg/L		0.01	E200.8	10/21/16 19:24 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	0.97	pCi/L			E903.0	11/07/16 12:01 / eli-ca
Radium 226 precision (±)		pCi/L			E903.0	11/07/16 12:01 / eli-ca
Radium 226 MDC	0.14	pCi/L			E903.0	11/07/16 12:01 / eli-ca
Radium 228	1.2	pCi/L	U		RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)		pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC		pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228		pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA

Lab ID: B16101433-002 Client Sample ID: SSP MW-2

Report Date: 11/14/16

Collection Date: 10/18/16 09:12

DateReceived: 10/19/16

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	Н	0.1		A4500-H B	10/19/16 13:51 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	10/20/16 10:00 / jef
,		Ü					,
INORGANICS	0040	,,	5	0		F000 0	10/01/10 05 50 / '
Chloride		mg/L	D	6		E300.0	10/21/16 05:56 / mej
Sulfate		mg/L	D	20		E300.0	10/21/16 05:56 / mej
Fluoride	0.2	mg/L		0.1		A4500-F C	10/20/16 14:25 / cjm
CATIONS							
Calcium		mg/L		1		E200.7	10/21/16 21:01 / rlh
Magnesium	218	mg/L		1		E200.7	10/21/16 21:01 / rlh
Potassium		mg/L		1		E200.7	10/21/16 21:01 / rlh
Sodium	1280	mg/L	D	4		E200.7	10/21/16 21:01 / rlh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/21/16 19:27 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	10/21/16 19:27 / jpv
Barium	0.06	mg/L		0.01		E200.7	10/21/16 21:01 / rlh
Beryllium	0.016	mg/L		0.001		E200.8	10/21/16 19:27 / jpv
Boron	0.60	mg/L		0.05		E200.7	10/21/16 21:01 / rlh
Cadmium	ND	mg/L		0.01		E200.8	10/21/16 19:27 / jpv
Chromium		mg/L		0.01		E200.8	10/21/16 19:27 / jpv
Cobalt		mg/L		0.02		E200.8	10/21/16 19:27 / jpv
Lead		mg/L		0.01		E200.8	10/21/16 19:27 / jpv
Lithium		mg/L	D	0.02		E200.7	10/21/16 21:01 / rlh
Mercury		mg/L		0.001		E245.1	10/20/16 11:46 / mas
Molybdenum		mg/L		0.05		E200.8	10/21/16 19:27 / jpv
Selenium		mg/L		0.01		E200.8	10/21/16 19:27 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/21/16 19:27 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.0	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.28	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.14	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 228		pCi/L	U			RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC		pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Report Date: 11/14/16

Collection Date: 10/18/16 10:23

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA **Lab ID:** B16101433-003

Lab ID:B16101433-003DateReceived:10/19/16Client Sample ID:SSP MW-3Matrix:Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allaryses	Result	Office	Quamers			Wethou	Analysis bate / by
PHYSICAL PROPERTIES							
рН	4.5	s.u.	Н	0.1		A4500-H B	10/19/16 13:54 / pjw
Solids, Total Dissolved TDS @ 180 C	6690	mg/L	D	100		A2540 C	10/20/16 10:01 / jef
INORGANICS							
Chloride	1880	mg/L	D	6		E300.0	10/21/16 06:09 / mej
Sulfate		mg/L	D	20		E300.0	10/21/16 06:09 / mej
Fluoride		mg/L		0.1		A4500-F C	10/20/16 14:31 / cjm
CATIONS							
Calcium	699	mg/L		1		E200.7	10/21/16 21:04 / rlh
Magnesium		mg/L		1		E200.7	10/21/16 21:04 / rlh
Potassium		mg/L		1		E200.7	10/21/16 21:04 / rlh
Sodium		mg/L	D	4		E200.7	10/21/16 21:04 / rlh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/21/16 19:30 / jpv
Arsenic		mg/L		0.01		E200.8	10/21/16 19:30 / jpv
Barium		mg/L		0.01		E200.7	10/21/16 21:04 / rlh
Beryllium	0.120	mg/L		0.001		E200.8	10/21/16 19:30 / jpv
Boron	2.70	mg/L		0.05		E200.7	10/21/16 21:04 / rlh
Cadmium	0.05	mg/L		0.01		E200.8	10/21/16 19:30 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/21/16 19:30 / jpv
Cobalt	0.58	mg/L		0.02		E200.8	10/21/16 19:30 / jpv
Lead	ND	mg/L		0.01		E200.8	10/21/16 19:30 / jpv
Lithium	0.75	mg/L	D	0.02		E200.7	10/21/16 21:04 / rlh
Mercury	ND	mg/L		0.001		E245.1	10/20/16 11:47 / mas
Molybdenum	ND	mg/L		0.05		E200.8	10/21/16 19:30 / jpv
Selenium	ND	mg/L		0.01		E200.8	10/21/16 19:30 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/21/16 19:30 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	8.0	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	1.6	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.13	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 228	17	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	3.2	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228	24.7	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	3.5	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

4DO Minimum detectable

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA **Lab ID:** B16101433-004

Client Sample ID: SSP MW-4

Report Date: 11/14/16

Collection Date: 10/18/16 11:21

DateReceived: 10/19/16

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.5	s.u.	Н	0.1		A4500-H B	10/19/16 13:56 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	40		A2540 C	10/20/16 10:01 / jef
INODOANIOO		Ü					,
INORGANICS	10.10		5	•		F000 0	10/01/10 10 50 /
Chloride		mg/L	D	6		E300.0	10/21/16 16:56 / mej
Sulfate		mg/L	D	20		E300.0	10/21/16 16:56 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	10/20/16 14:35 / cjm
CATIONS							
Calcium	413	mg/L		1		E200.7	10/21/16 21:08 / rlh
Magnesium	85	mg/L		1		E200.7	10/21/16 21:08 / rlh
Potassium	53	mg/L		1		E200.7	10/21/16 21:08 / rlh
Sodium	770	mg/L	D	4		E200.7	10/21/16 21:08 / rlh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/21/16 19:32 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/21/16 19:32 / jpv
Barium	0.03	mg/L		0.01		E200.7	10/21/16 21:08 / rlh
Beryllium	ND	mg/L		0.001		E200.8	10/21/16 19:32 / jpv
Boron	1.31	mg/L		0.05		E200.7	10/21/16 21:08 / rlh
Cadmium	ND	mg/L		0.01		E200.8	10/21/16 19:32 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/21/16 19:32 / jpv
Cobalt	ND	mg/L		0.02		E200.8	10/21/16 19:32 / jpv
Lead		mg/L		0.01		E200.8	10/21/16 19:32 / jpv
Lithium		mg/L	D	0.02		E200.7	10/21/16 21:08 / rlh
Mercury		mg/L		0.001		E245.1	10/20/16 11:49 / mas
Molybdenum		mg/L		0.05		E200.8	10/21/16 19:32 / jpv
Selenium		mg/L		0.01		E200.8	11/07/16 15:59 / rlh
Thallium	ND	mg/L		0.01		E200.8	10/21/16 19:32 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.4	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.34	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.14	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 228	0.93	pCi/L	U			RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	0.79	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228	2.3	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **TMPA**

Lab ID: B16101433-005 Client Sample ID: EQBK-101816

Collection Date: 10/18/16 12:30 DateReceived: 10/19/16 Matrix: Ground Water

Report Date: 11/14/16

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
	5.9	0.11	Н	0.1		A4500-H B	10/19/16 13:59 / pjw
pH Solids, Total Dissolved TDS @ 180 C		mg/L	П	10		A4500-H B A2540 C	10/19/16 13:39 / pjw 10/20/16 10:01 / jef
Solids, Total Dissolved TDS (# 160 C	ND	IIIg/L		10		A2340 C	10/20/10 10.017 jei
INORGANICS							
Chloride	ND	mg/L		1		E300.0	10/21/16 17:37 / mej
Sulfate	ND	mg/L		1		E300.0	10/21/16 17:37 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	10/20/16 14:44 / cjm
CATIONS							
Calcium	ND	mg/L		1		E200.7	10/21/16 21:11 / rlh
Magnesium	ND	mg/L		1		E200.7	10/21/16 21:11 / rlh
Potassium	ND	mg/L		1		E200.7	10/21/16 21:11 / rlh
Sodium	ND	mg/L		1		E200.7	10/21/16 21:11 / rlh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/21/16 19:35 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/21/16 19:35 / jpv
Barium	ND	mg/L		0.01		E200.7	10/21/16 21:11 / rlh
Beryllium	ND	mg/L		0.001		E200.7	10/21/16 21:11 / rlh
Boron	ND	mg/L		0.05		E200.7	10/21/16 21:11 / rlh
Cadmium	ND	mg/L		0.01		E200.7	10/21/16 21:11 / rlh
Chromium		mg/L		0.01		E200.8	10/21/16 19:35 / jpv
Cobalt	ND	mg/L		0.02		E200.7	10/21/16 21:11 / rlh
Lead	ND	mg/L		0.01		E200.8	10/21/16 19:35 / jpv
Lithium	ND	mg/L		0.01		E200.7	10/21/16 21:11 / rlh
Mercury		mg/L		0.001		E245.1	10/20/16 11:51 / mas
Molybdenum	ND	mg/L		0.05		E200.8	10/21/16 19:35 / jpv
Selenium		mg/L		0.01		E200.8	10/21/16 19:35 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/21/16 19:35 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.07	pCi/L	U			E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.09	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.14	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 228	0.51	pCi/L	U			RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	0.80	•				RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228		pCi/L	U			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA **Lab ID:** B16101433-006

Client Sample ID: AP MW-4

Report Date: 11/14/16

Collection Date: 10/18/16 13:54

DateReceived: 10/19/16

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	Н	0.1		A4500-H B	10/19/16 14:01 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	40		A2540 C	10/20/16 10:01 / jef
INORGANICS							
Chloride	511	mg/L	D	3		E300.0	10/21/16 17:50 / mej
Sulfate		mg/L	D	9		E300.0	10/21/16 17:50 / mej
Fluoride		mg/L		0.1		A4500-F C	10/20/16 14:48 / cjm
CATIONS							
Calcium	538	mg/L		1		E200.7	10/21/16 21:15 / rlh
Magnesium		mg/L		1		E200.7	10/21/16 21:15 / rlh
Potassium		mg/L		1		E200.7	10/21/16 21:15 / rlh
Sodium	564	mg/L	D	4		E200.7	10/21/16 21:15 / rlh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/21/16 19:38 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
3arium Sarium	0.02	mg/L		0.01		E200.7	10/21/16 21:15 / rlh
Beryllium	ND	mg/L		0.001		E200.8	10/21/16 19:38 / jpv
Boron	2.10	mg/L		0.05		E200.7	10/21/16 21:15 / rlh
Cadmium	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
Cobalt	ND	mg/L		0.02		E200.8	10/21/16 19:38 / jpv
₋ead	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
Lithium	1.09	mg/L	D	0.02		E200.7	10/21/16 21:15 / rlh
Mercury	ND	mg/L		0.001		E245.1	10/20/16 11:53 / mas
Molybdenum	ND	mg/L		0.05		E200.8	10/21/16 19:38 / jpv
Selenium	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/21/16 19:38 / jpv
RADIONUCLIDES - TOTAL							
Radium 226		pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.13	pCi/L				E903.0	11/07/16 13:53 / eli-ca
Radium 228	1.3	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	0.97	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228	2.3	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **TMPA** Lab ID: B16101433-007

Client Sample ID: AP MW-5

Report Date: 11/14/16 Collection Date: 10/18/16 14:48 DateReceived: 10/19/16

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL Method	d Analysis Date / By
	rtocurt	· · · · ·	quamoro			,
PHYSICAL PROPERTIES						
рН		s.u.	Н	0.1	A4500-	
Solids, Total Dissolved TDS @ 180 C	5040	mg/L	D	40	A2540	C 10/20/16 10:01 / jef
INORGANICS						
Chloride	451	mg/L	D	6	E300.0	10/21/16 18:04 / mej
Sulfate	2630	mg/L	D	20	E300.0	10/21/16 18:04 / mej
Fluoride	1.3	mg/L		0.1	A4500-	F C 10/20/16 14:56 / cjm
CATIONS						
Calcium	503	mg/L		1	E200.7	10/21/16 21:18 / rlh
Magnesium	115	mg/L		1	E200.7	10/21/16 21:18 / rlh
Potassium	39	mg/L		1	E200.7	10/21/16 21:18 / rlh
Sodium	672	mg/L	D	4	E200.7	10/21/16 21:18 / rlh
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/21/16 19:40 / jpv
Arsenic	0.01	mg/L		0.01	E200.8	10/21/16 19:40 / jpv
Barium	0.02	mg/L		0.01	E200.7	10/21/16 21:18 / rlh
Beryllium	0.087	mg/L		0.001	E200.8	10/21/16 19:40 / jpv
Boron	3.33	mg/L		0.05	E200.7	10/21/16 21:18 / rlh
Cadmium	ND	mg/L		0.01	E200.8	10/21/16 19:40 / jpv
Chromium	ND	mg/L		0.01	E200.8	10/21/16 19:40 / jpv
Cobalt	0.18	mg/L		0.02	E200.8	10/21/16 19:40 / jpv
Lead	ND	mg/L		0.01	E200.8	10/21/16 19:40 / jpv
Lithium	0.60	mg/L	D	0.02	E200.7	10/21/16 21:18 / rlh
Mercury	ND	mg/L		0.001	E245.1	10/24/16 13:42 / mas
Molybdenum	ND	mg/L		0.05	E200.8	10/21/16 19:40 / jpv
Selenium	0.01	mg/L		0.01	E200.8	11/10/16 16:10 / rlh
Thallium	ND	mg/L		0.01	E200.8	10/21/16 19:40 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	1.8	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.43	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.13	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 228	3.4	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	1.2	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.2	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228	5.2	pCi/L			A7500-	-RA 11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L			A7500-	·RA 11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L			A7500-	RA 11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA

Lab ID: B16101433-008

Client Sample ID: DUP-1

Report Date: 11/14/16
Collection Date: 10/18/16
DateReceived: 10/19/16

Matrix: Ground Water

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By PHYSICAL PROPERTIES Hq 6.5 s.u. Н 0.1 A4500-H B 10/19/16 14:07 / piw Solids, Total Dissolved TDS @ 180 C 3780 mg/L П 40 A2540 C 10/20/16 10:01 / jef **INORGANICS** D 6 Chloride 1210 mg/L E300.0 10/21/16 18:17 / mej Sulfate D 20 E300.0 1190 mg/L 10/21/16 18:17 / mej Fluoride 0.1 A4500-F C 10/20/16 14:59 / cjm ND mg/L **CATIONS** Calcium 398 mg/L 1 E200.7 10/21/16 21:22 / rlh E200.7 10/21/16 21:22 / rlh Magnesium 81 mg/L 1 Potassium 52 mg/L E200.7 10/21/16 21:22 / rlh 1 D Sodium 740 mg/L 1 E200.7 10/21/16 21:22 / rlh **METALS, TOTAL RECOVERABLE** Antimony ND mg/L 0.05 E200.8 10/21/16 19:51 / jpv Arsenic ND mg/L 0.01 E200.8 10/21/16 19:51 / jpv Barium 0.03 mg/L 0.01 E200.7 10/21/16 21:22 / rlh Beryllium ND mg/L 0.001 E200.8 10/21/16 19:51 / jpv 0.05 E200.7 Boron 1.29 mg/L 10/21/16 21:22 / rlh 0.01 Cadmium ND mg/L F2008 10/21/16 19:51 / jpv Chromium ND mg/L 0.01 E200.8 10/21/16 19:51 / jpv Cobalt ND mg/L 0.02 E200.8 10/21/16 19:51 / jpv Lead ND mg/L 0.01 E200.8 10/21/16 19:51 / ipv D Lithium 1.00 mg/L 0.02 E200.7 10/21/16 21:22 / rlh Mercury ND mg/L 0.001 F245 1 10/20/16 12:01 / mas Molybdenum ND mg/L 0.05 E200.8 10/21/16 19:51 / jpv Selenium ND mg/L 0.001 E200.8 11/07/16 16:02 / rlh Thallium 0.01 E200.8 ND mg/L 10/21/16 19:51 / jpv **RADIONUCLIDES - TOTAL** Radium 226 2.1 pCi/L E903.0 11/07/16 13:53 / eli-ca Radium 226 precision (±) 0.51 pCi/L E903.0 11/07/16 13:53 / eli-ca Radium 226 MDC 0.17 pCi/L E903.0 11/07/16 13:53 / eli-ca Radium 228 2.4 pCi/L **RA-05** 11/02/16 13:13 / eli-ca Radium 228 precision (±) 0.96 pCi/L **RA-05** 11/02/16 13:13 / eli-ca Radium 228 MDC 1.6 pCi/L **RA-05** 11/02/16 13:13 / eli-ca 11/08/16 10:25 / eli-ca Radium 226 + Radium 228 4.5 pCi/L A7500-RA Radium 226 + Radium 228 precision (±) 1.1 pCi/L A7500-RA 11/08/16 10:25 / eli-ca Radium 226 + Radium 228 MDC 1.6 pCi/L A7500-RA 11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Mill I I I I I I I

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA

Lab ID: B16101433-009 Client Sample ID: AP MW-1D Report Date: 11/14/16

Collection Date: 10/18/16 15:38

DateReceived: 10/19/16

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
рН	6.0	s.u.	Н	0.1	A4500-H B	10/19/16 14:09 / pjw
Solids, Total Dissolved TDS @ 180 C	1410	mg/L	D	20	A2540 C	10/20/16 10:02 / jef
INORGANICS						
Chloride	233	mg/L		1	E300.0	10/21/16 18:31 / mej
Sulfate		mg/L	D	4	E300.0	10/21/16 18:31 / mej
Fluoride		mg/L		0.1	A4500-F C	10/20/16 15:15 / cjm
CATIONS						
Calcium	77	mg/L		1	E200.7	10/21/16 21:26 / rlh
Magnesium		mg/L		1	E200.7	10/21/16 21:26 / rlh
Potassium	11	mg/L		1	E200.7	10/21/16 21:26 / rlh
Sodium	323	mg/L		1	E200.7	10/21/16 21:26 / rlh
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/21/16 19:54 / jpv
Arsenic	0.01	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
Barium	0.02	mg/L		0.01	E200.7	10/21/16 21:26 / rlh
Beryllium	ND	mg/L		0.001	E200.7	10/21/16 21:26 / rlh
Boron	4.62	mg/L		0.05	E200.7	10/21/16 21:26 / rlh
Cadmium	ND	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
Chromium	ND	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
Cobalt	ND	mg/L		0.02	E200.8	10/21/16 19:54 / jpv
Lead	ND	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
Lithium	0.05	mg/L		0.01	E200.7	11/10/16 16:13 / jh
Mercury	ND	mg/L		0.001	E245.1	10/20/16 12:03 / mas
Molybdenum	ND	mg/L		0.05	E200.8	10/21/16 19:54 / jpv
Selenium	ND	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
Thallium	ND	mg/L		0.01	E200.8	10/21/16 19:54 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	0.53	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 226 precision (±)	0.17	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 226 MDC	0.15	pCi/L			E903.0	11/07/16 13:53 / eli-ca
Radium 228	2.3	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 228 precision (±)	1.2	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 228 MDC	1.3	pCi/L			RA-05	11/02/16 13:13 / eli-ca
Radium 226 + Radium 228	2.8	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:11/09/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-8302
Lab ID:	LCS-RA226-8302	Lab	oratory Cor	ntrol Sample			Run: TENN	ELEC-3_161026	С	11/07/	16 12:01
Radium 22	26		10	pCi/L		96	80	120			
Lab ID:	MB-RA226-8302	3 Met	thod Blank				Run: TENN	ELEC-3_161026	С	11/07/	16 12:01
Radium 22	26		0.2	pCi/L							
Radium 22	26 precision (±)		0.1	pCi/L							
Radium 22	26 MDC		0.1	pCi/L							
Lab ID:	C16100328-004GMS	Sar	nple Matrix	Spike			Run: TENN	ELEC-3_161026	С	11/07/	16 12:01
Radium 22	26		23	pCi/L		88	70	130			
Lab ID:	C16100328-004GMSI	D Sar	nple Matrix	Spike Duplicate			Run: TENN	ELEC-3_161026	С	11/07/	16 12:01
Radium 22	26		25	pCi/L		94	70	130	6.7	20	

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:11/09/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: RA	228-5350
Lab ID:	LCS-228-RA226-8302	2 Lab	oratory Cor	ntrol Sample			Run: TENN	ELEC-3_161026	Α	11/02/	16 11:35
Radium 22	28		7.7	pCi/L		90	80	120			
Lab ID:	MB-RA226-8302	3 Met	thod Blank				Run: TENN	ELEC-3_161026	Α	11/02/	16 11:35
Radium 22	28		-0.02	pCi/L							U
Radium 22	28 precision (±)		0.6	pCi/L							
Radium 22	28 MDC		1	pCi/L							
Lab ID:	C16100328-004GMS	San	nple Matrix	Spike			Run: TENN	ELEC-3_161026	Α	11/02/	16 11:35
Radium 22	28		25	pCi/L		105	70	130			
Lab ID:	C16100328-004GMSI) San	nple Matrix	Spike Duplicate			Run: TENN	ELEC-3_161026	Α	11/02/	16 11:35
Radium 22	28		22	pCi/L		92	70	130	13	20	

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	lytical Rur	n: ICP203-B	_161021 <i>A</i>
Lab ID:	ICV	10 Cor	itinuing Cal	ibration Ver	ification Standar	d				10/21	/16 10:47
Barium			2.48	mg/L	0.10	99	95	105			
Beryllium			1.24	mg/L	0.010	99	95	105			
Boron			2.49	mg/L	0.10	100	95	105			
Cadmium			2.44	mg/L	0.010	98	95	105			
Calcium			25.3	mg/L	1.0	101	95	105			
Cobalt			2.44	mg/L	0.020	98	95	105			
Lithium			1.29	mg/L	0.10	104	95	105			
Magnesiun	n		25.8	mg/L	1.0	103	95	105			
Potassium			25.4	mg/L	1.0	102	95	105			
Sodium			25.4	mg/L	1.0	102	95	105			
Method:	E200.7									Batc	h: 103766
Lab ID:	MB-103766	10 Met	hod Blank				Run: ICP20	3-B_161021A		10/21	/16 20:25
Barium			0.0005	mg/L	0.0003						
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.0008						
Calcium			ND	mg/L	0.03						
Cobalt			0.002	mg/L	0.001						
Lithium			0.01	mg/L	0.002						
Magnesiun	n		ND	mg/L	0.004						
Potassium			ND	mg/L	0.08						
Sodium			ND	mg/L	0.02						
Lab ID:	LCS-103766	10 Lab	oratory Cor	ntrol Sample	e		Run: ICP20	3-B_161021A		10/21	/16 20:29
Barium			0.539	mg/L	0.10	108	85	115			
Beryllium			0.271	mg/L	0.010	108	85	115			
Boron			0.514	mg/L	0.10	103	85	115			
Cadmium			0.256	mg/L	0.010	103	85	115			
Calcium			26.2	mg/L	1.0	105	85	115			
Cobalt			0.512	mg/L	0.050	102	85	115			
Lithium			0.529	mg/L	0.10	104	85	115			
Magnesiun	n		26.2	mg/L	1.0	105	85	115			
Potassium			25.1	mg/L	1.0	100	85	115			
Sodium			26.3	mg/L	1.0	105	85	115			
Lab ID:	B16101406-001BMS3	10 San	nple Matrix	Spike			Run: ICP20	3-B_161021A		10/21	/16 20:43
Barium			0.916	mg/L	0.050	99	70	130			
Beryllium			0.258	mg/L	0.0010	103	70	130			
Boron			0.873	mg/L	0.050	94	70	130			
Cadmium			0.237	mg/L	0.0039	95	70	130			
Calcium			63.6	mg/L	1.0	97	70	130			
Cobalt			0.495	mg/L	0.0063	96	70	130			
Lithium			1.19	mg/L	0.10	90	70	130			
Magnesiun	n		46.5	mg/L	1.0	98	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 103766
Lab ID:	B16101406-001BMS3	3 10 Sai	mple Matrix	Spike			Run: ICP20	3-B_161021A		10/21/	16 20:43
Potassium			40.0	mg/L	1.0	92	70	130			
Sodium			633	mg/L	1.8		70	130			Α
Lab ID:	B16101406-001BMSI) 10 Sai	mple Matrix	Spike Dup	olicate		Run: ICP20	3-B_161021A		10/21/	16 20:46
Barium			0.869	mg/L	0.050	90	70	130	5.2	20	
Beryllium			0.243	mg/L	0.0010	97	70	130	5.8	20	
Boron			0.809	mg/L	0.050	81	70	130	7.5	20	
Cadmium			0.242	mg/L	0.0039	97	70	130	2.3	20	
Calcium			60.6	mg/L	1.0	85	70	130	4.9	20	
Cobalt			0.493	mg/L	0.0063	96	70	130	0.2	20	
Lithium			1.13	mg/L	0.10	78	70	130	5.0	20	
Magnesium	1		44.0	mg/L	1.0	88	70	130	5.5	20	
Potassium			38.4	mg/L	1.0	86	70	130	3.9	20	
Sodium			596	mg/L	1.8		70	130	6.0	20	Α
Method:	E200.7							Ana	lytical Ru	n: ICP203-B_	161110A
Lab ID:	ICV	Co	ntinuing Cal	libration Ve	erification Standar	ď				11/10/	16 14:36
Lithium			1.25	mg/L	0.10	100	95	105			
Method:	E200.7									Batcl	h: 103766
Lab ID:	MB-103766	Ме	thod Blank				Run: ICP20	3-B_161110A		11/10/	16 16:09
Lithium			0.005	mg/L	0.002			_			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Analyte		Count R	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS206-B_	_161021A
Lab ID:	QCS	10 Initial C	alibratio	n Verificati	on Standard					10/21/	16 17:23
Antimony		0.	.0520	mg/L	0.050	104	90	110			
Arsenic		0.	.0513	mg/L	0.0050	103	90	110			
Beryllium		0.	.0242	mg/L	0.0010	97	90	110			
Cadmium		0.	.0266	mg/L	0.0010	106	90	110			
Chromium		0.	.0520	mg/L	0.010	104	90	110			
Cobalt		0.	.0511	mg/L	0.010	102	90	110			
Lead		0.	.0486	mg/L	0.010	97	90	110			
Molybdenu	ım	0.	.0483	mg/L	0.0050	97	90	110			
Selenium		0.	.0497	mg/L	0.0050	99	90	110			
Thallium		0.	.0486	mg/L	0.10	97	90	110			
Method:	E200.8									Batch	n: 103766
Lab ID:	MB-103766	10 Method	l Blank				Run: ICPM	S206-B_161021A		10/21/	16 19:00
Antimony			ND	mg/L	3E-05						
Arsenic		0.	.0001	mg/L	7E-05						
Beryllium			ND	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium		5	5E-05	mg/L	4E-05						
Cobalt		2	2E-05	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	ım	8	3E-05	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-103766	10 Laborat	tory Con	itrol Sample	Э		Run: ICPM	S206-B_161021A		10/21/	16 19:06
Antimony		(0.530	mg/L	0.0050	106	85	115			
Arsenic		(0.532	mg/L	0.0010	106	85	115			
Beryllium		(0.237	mg/L	0.0010	95	85	115			
Cadmium		(0.263	mg/L	0.0010	105	85	115			
Chromium		(0.478	mg/L	0.0010	96	85	115			
Cobalt		(0.484	mg/L	0.0010	97	85	115			
Lead		(0.488	mg/L	0.0010	98	85	115			
Molybdenu	ım	(0.483	mg/L	0.0050	97	85	115			
Selenium		(0.500	mg/L	0.0050	100	85	115			
Thallium		(0.487	mg/L	0.0010	97	85	115			
Lab ID:	B16101406-001BMS3	10 Sample	Matrix	Spike			Run: ICPM	S206-B_161021A		10/21/	16 19:16
Antimony		(0.513	mg/L	0.0010	102	70	130			
Arsenic		(0.834	mg/L	0.0010	109	70	130			
Beryllium		(0.231	mg/L	0.0010	92	70	130			
Cadmium		(0.247	mg/L	0.0010	99	70	130			
Chromium		(0.469	mg/L	0.0050	94	70	130			
Cobalt		(0.462	mg/L	0.0050	92	70	130			
Lead			0.456	mg/L	0.0010	91	70	130			
Molybdenu	ım		0.477	mg/L	0.0010	95	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 103766
Lab ID:	B16101406-001BMS	3 10 Sa	mple Matrix	Spike			Run: ICPM	S206-B_161021	4	10/21	/16 19:16
Selenium			0.482	mg/L	0.0010	96	70	130			
Thallium			0.429	mg/L	0.00050	86	70	130			
Lab ID:	B16101406-001BMSI	D 10 Sa	mple Matrix	Spike Dup	olicate		Run: ICPM	S206-B_161021	4	10/21	/16 19:19
Antimony			0.534	mg/L	0.0010	107	70	130	4.1	20	
Arsenic			0.882	mg/L	0.0010	118	70	130	5.6	20	
Beryllium			0.251	mg/L	0.0010	100	70	130	8.5	20	
Cadmium			0.267	mg/L	0.0010	107	70	130	7.6	20	
Chromium			0.502	mg/L	0.0050	100	70	130	6.9	20	
Cobalt			0.496	mg/L	0.0050	99	70	130	7.1	20	
Lead			0.489	mg/L	0.0010	98	70	130	7.1	20	
Molybdenum	1		0.505	mg/L	0.0010	101	70	130	5.7	20	
Selenium			0.510	mg/L	0.0010	102	70	130	5.6	20	
Thallium			0.467	mg/L	0.00050	93	70	130	8.5	20	
Lab ID:	B16101436-005CMS3	3 10 Sa	mple Matrix	Spike			Run: ICPM	S206-B_161021	4	10/21	/16 20:07
Antimony			0.528	mg/L	0.0010	106	70	130			
Arsenic			0.530	mg/L	0.0010	106	70	130			
Beryllium			0.234	mg/L	0.0010	94	70	130			
Cadmium			0.251	mg/L	0.0010	101	70	130			
Chromium			0.474	mg/L	0.0050	95	70	130			
Cobalt			0.477	mg/L	0.0050	95	70	130			
Lead			0.469	mg/L	0.0010	94	70	130			
Molybdenum	1		0.519	mg/L	0.0010	96	70	130			
Selenium			0.480	mg/L	0.0010	96	70	130			
Thallium			0.484	mg/L	0.00050	97	70	130			
Lab ID:	B16101436-005CMSI	D 10 Sa	mple Matrix	Spike Dur	olicate		Run: ICPM	S206-B_161021	Α.	10/21	/16 20:10
Antimony			0.510	mg/L	0.0010	102	70	130	3.5	20	
Arsenic			0.498	mg/L	0.0010	99	70	130	6.3	20	
Beryllium			0.227	mg/L	0.0010	91	70	130	3.2	20	
Cadmium			0.241	mg/L	0.0010	96	70	130	4.4	20	
Chromium			0.444	mg/L	0.0050	89	70	130	6.5	20	
Cobalt			0.455	mg/L	0.0050	91	70	130	4.8	20	
Lead			0.468	mg/L	0.0010	94	70	130	0.2	20	
Molybdenum	1		0.499	mg/L	0.0010	92	70	130	3.9	20	
Selenium	•		0.484	mg/L	0.0010	97	70	130	0.8	20	
Thallium			0.465	mg/L	0.00050	93	70	130	3.9	20	
Hamulli			0.403	mg/L	0.00030	93	70	130	3.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytic	al Run: I	CPMS206-B_	_161107A
Lab ID:	QCS	Initial	Calibratio	on Verifica	tion Standard					11/07/	16 15:33
Selenium			0.0465	mg/L	0.0050	93	90	110			
Method:	E200.8									Batcl	n: 103766
Lab ID:	MB-103766	Metho	od Blank				Run: ICPM	S206-B_161107	A	11/07/	16 15:46
Selenium			ND	mg/L	0.0004						
Method:	E200.8							Analytic	al Run: I	CPMS206-B_	_161110A
Lab ID:	QCS	Initial	Calibratio	on Verifica	tion Standard					11/10/	16 10:57
Selenium			0.0469	mg/L	0.0050	94	90	110			
Method:	E200.8									Batch	n: 103766
Lab ID:	MB-103766	Metho	od Blank				Run: ICPM	S206-B_161110	Α	11/10/	16 16:02
Selenium			ND	mg/L	0.0004						

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/14/16Project:TMPAWork Order:B16101433

Method: Lab ID: Mercury Method:										Qual
Mercury	E245.1						Analytica	l Run:	HGCV202-B	_161020A
	ICV	Initial Ca	ibration Veri	fication Standard					10/20/	/16 11:15
Method:		0.00	207 mg/l	0.00010	104	90	110			
	E245.1								Batc	h: 103757
Lab ID:	MB-103757	Method E	Blank			Run: HGC\	/202-B_161020A		10/20	/16 11:36
Mercury			ND mg/l	4E-06	i					
Lab ID:	LCS-103757	Laborato	ry Control Sa	ample		Run: HGC\	/202-B_161020A		10/20/	/16 11:38
Mercury		0.00	196 mg/l	0.00010	98	85	115			
Lab ID:	B16101433-001BMS	Sample I	/latrix Spike			Run: HGC\	/202-B_161020A		10/20/	/16 11:42
Mercury		0.00	200 mg/l	0.00010	100	70	130			
Lab ID:	B16101433-001BMSI	D Sample I	//atrix Spike	Duplicate		Run: HGC\	/202-B_161020A		10/20/	/16 11:44
Mercury		0.00	201 mg/l	0.00010	100	70	130	0.6	30	
Lab ID:	B16101436-005CMS	Sample I	//atrix Spike			Run: HGC\	/202-B_161020A		10/20	/16 12:12
Mercury		0.00	203 mg/l	0.00010	102	70	130			
Lab ID:	B16101436-005CMSI	D Sample I	//atrix Spike	Duplicate		Run: HGC\	/202-B_161020A		10/20	/16 12:14
Mercury		0.00	203 mg/l	0.00010	101	70	130	0.1	30	
Method:	E245.1						Analytica	l Run:	HGCV202-B	_161024A
Lab ID:	ICV	Initial Ca	ibration Veri	fication Standard					10/24	/16 12:25
Mercury		0.00	206 mg/l	0.00010	103	90	110			
Method:	E245.1								Batc	h: 103847
Lab ID:	MB-103847	Method E	Blank			Run: HGC\	/202-B_161024A		10/24	/16 13:38
Mercury		5E	-05 mg/l	4E-06	6					
Lab ID:	LCS-103847	Laborato	ry Control Sa	ample		Run: HGC\	/202-B_161024A		10/24	/16 13:40
Mercury		0.00	203 mg/l	0.00010	99	85	115			
Lab ID:	B16101692-004BMS	Sample I	//atrix Spike			Run: HGC\	/202-B_161024A		10/24	/16 13:57
Mercury		0.00	202 mg/l	0.00010	99	70	130			
Lab ID:	B16101692-004BMSI	D Sample I	//atrix Spike	Duplicate		Run: HGC\	/202-B_161024A		10/24	/16 13:59
Mercury		0.00	204 mg/l	0.00010	100	70	130	0.9	30	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/04/16Project:TMPAWork Order:B16101433

Analyte	Count Result	Units	RL	%REC Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C							Batch	n: 103794
Lab ID: MB-103794	Method Blank			Run: BAL#	SD-15_161020A		10/20/	16 09:59
Solids, Total Dissolved TDS @ 1	80 C ND	mg/L	5					
Lab ID: LCS-103794	Laboratory Co	ntrol Sample		Run: BAL#	SD-15_161020A		10/20/	16 09:59
Solids, Total Dissolved TDS @ 1	80 C 979	mg/L	10	96 90	110			
Lab ID: B16101406-001A DU	JP Sample Duplic	ate		Run: BAL#	SD-15_161020A		10/20/	16 10:00
Solids, Total Dissolved TDS @ 1	80 C 1710	mg/L	20			2.2	5	
Lab ID: B16101433-009A DU	JP Sample Duplic	ate		Run: BAL #	SD-15_161020A		10/20/	16 10:02
Solids, Total Dissolved TDS @ 1	80 C 1420	mg/L	20			0.4	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/04/16Project:TMPAWork Order:B16101433

Analyte		Count Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C						Analytic	al Run:	MAN-TECH_	161020A
Lab ID:	ICV	Initial Calibrat	ion Verification	Standard					10/20/	16 14:07
Fluoride		1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C								Batch:	R269038
Lab ID:	MBLK	Method Blank				Run: MAN-	TECH_161020A		10/20/	16 14:01
Fluoride		ND	mg/L	0.03						
Lab ID:	LFB	Laboratory Fo	rtified Blank			Run: MAN-	TECH_161020A		10/20/	16 14:04
Fluoride		0.990	mg/L	0.10	99	90	110			
Lab ID:	B16101406-001AMS	Sample Matrix	x Spike			Run: MAN-	TECH_161020A		10/20/	16 14:12
Fluoride		3.46	mg/L	0.10	103	80	120			
Lab ID:	B16101406-001AMS	D Sample Matrix	x Spike Duplica	ate		Run: MAN-	TECH_161020A		10/20/	16 14:15
Fluoride		3.44	mg/L	0.10	101	80	120	0.6	10	
Lab ID:	B16101433-009AMS	Sample Matrix	x Spike			Run: MAN-	TECH_161020A		10/20/	16 15:18
Fluoride		1.62	mg/L	0.10	100	80	120			
Lab ID:	B16101433-009AMS	D Sample Matrix	x Spike Duplica	ate		Run: MAN-	TECH_161020A		10/20/	16 15:20
Fluoride		1.63	mg/L	0.10	101	80	120	0.6	10	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/04/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PF	ISC _101-B	_161019A
Lab ID:	pH 8	Initia	al Calibratio	n Verificat	ion Standard					10/19/	/16 08:52
рН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R268902
Lab ID:	B16101433-009ADUF	S an	nple Duplica	ate			Run: PHSC	_101-B_1610	19A	10/19/	/16 14:12
рН			6.05	s.u.	0.10				0.0	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/04/16Project:TMPAWork Order:B16101433

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC N	METROHM 1	_161020A
Lab ID:	ICV	2 Init	ial Calibrati	on Verification St	andard					10/20	/16 14:12
Chloride			2.23	mg/L	1.0	99	90	110			
Sulfate			8.84	mg/L	1.0	98	90	110			
Method:	E300.0									Batch:	R269049
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_16	1020A	10/20/	/16 14:25
Chloride			ND	mg/L	0.008						
Sulfate			ND	mg/L	0.06						
Lab ID:	LFB	2 Lal	ooratory Fo	tified Blank			Run: IC ME	TROHM 1_16	1020A	10/20	/16 14:39
Chloride			10.2	mg/L	1.0	102	90	110			
Sulfate			30.5	mg/L	1.0	102	90	110			
Lab ID:	B16101382-003AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 1_16	1020A	10/21	/16 04:08
Chloride			1060	mg/L	6.1	104	90	110			
Sulfate			3490	mg/L	18	104	90	110			
Lab ID:	B16101382-003AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1020A	10/21	/16 04:21
Chloride			1060	mg/L	6.1	105	90	110	0.6	20	
Sulfate			3510	mg/L	18	105	90	110	0.6	20	
Lab ID:	B16101433-004AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 1_16	1020A	10/21	/16 17:10
Chloride			2190	mg/L	6.1	95	90	110			
Sulfate			4280	mg/L	18	102	90	110			
Lab ID:	B16101433-004AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1020A	10/21	/16 17:23
Chloride			2170	mg/L	6.1	93	90	110	0.7	20	
Sulfate			4220	mg/L	18	100	90	110	1.2	20	
Lab ID:	B16101516-005AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 1_16	1020A	10/21	/16 23:27
Chloride			306	mg/L	1.2	102	90	110			
Sulfate			1320	mg/L	3.7	94	90	110			
Lab ID:	B16101516-005AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1020A	10/21/	/16 23:41
Chloride			304	mg/L	1.2	102	90	110	0.5	20	
Sulfate			1310	mg/L	3.7	93	90	110	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Gina McCartney

B16101433

Date Received: 10/19/2016

Login completed by:	On a moduling		Date	110001104. 10/10/2010	
Reviewed by:	BL2000\cindy		Re	eceived by: qej	
Reviewed Date:	10/20/2016		Car	rrier name: Return-UPS NDA N/C	
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present	
Custody seals intact on all s	shipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Present	
Custody seals intact on all s	sample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes 🗸	No 🗌		
Chain of custody signed wh	en relinquished and received?	Yes 🗸	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗸	No 🗌		
Samples in proper contained	r/bottle?	Yes 🔽	No 🗌		
Sample containers intact?		Yes 🔽	No 🗌		
Sufficient sample volume fo	r indicated test?	Yes 🔽	No 🗌		
All samples received within (Exclude analyses that are of such as pH, DO, Res Cl, Sc	considered field parameters	Yes 🔽	No 🗌		
Temp Blank received in all s	shipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	perature:	°C			
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable	
Water - pH acceptable upor	n receipt?	Yes √	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Container Temperature for Cooler 1 was 11.2°C no ice and Cooler 3 was 11.2°C no ice. Coolers 1 and 3 contained Radio Chemistry analysis.

Temperature Blank temperature for Cooler 2 was 0.4°C on ice.

2		
	GY	
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Chain of Custody and Analytical Request Record

	PINAL LINING	e as much lindination as possible.	ossible.	
Company Name:	Project Name, PWS, Permit, Etc.	ပံ	Sample Origin	EPA/State Compliance:
Amec Foster Wheeler	TMPA		State:	Yes 🗆 No
Report Mail Address:	COMPGNIENCE SOLPHONIENCE		Email:	Sampler: (Please Print)
Austin, 7X 18704	-	512-241-2310 gregus	gregseifert Damechiticom	Ba/sm
Invoice Address:	Invoice Contact & Phone:		Purchase Order:	Quote/Bottle Order:
Special Report/Formats:	S ANALYSIS	REQUESTED	Contact ELI prior to RUSH sample submittal	to Tabbed by:
	vainers S V B O I Solids say <u>O</u> ther Vater		for charges and scheduling – See Instruction Page	Cooler ID(s);
WWTP [Coperation U	Receipt Temp
☐ State: ☐ LEVEL IV ☐ Other: ☐ NELAC	mber Type t Wate station V - Dri	-	No Correct	On Ice:
		SEE_	•	Custody Seal On Bottle Y
SAMPLE IDENTIFICATION Collection Collection (Name, Location, Interval, etc.)	MATRIX S	PS .	I	Intact Y Signature Y Match
SSP/AP MW-1 10/17/16 1737	×	×		8610142a
258 MW-2 10/18/16 0912	×	X		1
3 SSP MW-3 1023	>\'\	.2		
* SSP MW-4 1121	X	×		700m
	>>	X		1500 14
	×.	X		200 100
AP MW-5 1448	×	×		V00 VØ
	X	X		% 700} 100\$
# APMW-1D V 1538	×.	8		\$00-N
-	Signature	Document of the state of the st	į,	77
Record Bellevished by Critical May 168/16 9/654	1	akan 1	0/18/14 1454 J	Signature
- Twandedco lo/le/llp	7	Min Mil Co	10/19/16 09	7. L
Signed Sample Disposal: Return to Client:	Lab	TAID OF THE COLUMN	ate/Time:	Significant Control of the Control o

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. TRIDDS This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

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ANALYTICAL SUMMARY REPORT

November 10, 2016

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B16101734

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 8 samples for Texas Municipal Power Agency on 10/21/2016 for analysis.

Quote ID: B3997

ariarysis.					
Lab ID	Client Sample ID	Collect Date Rec	eive Date N	Matrix	Test
B16101734-001	SFL MW-4	10/19/16 9:13 1	0/21/16 Gro		Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B16101734-002	SFL MW-3	10/19/16 10:37 1	0/21/16 Gro	ound Water	Same As Above
B16101734-004	SFL MW-2	10/19/16 13:50 1	0/21/16 Gro	ound Water	Same As Above
B16101734-005	Dup-2	10/19/16 0:00 1	0/21/16 Gro	ound Water	Same As Above
B16101734-006	EQBK-101916	10/19/16 13:00 1	0/21/16 Gro	ound Water	Same As Above
B16101734-007	SFL MW-5	10/19/16 14:30 1	0/21/16 Gro	ound Water	Same As Above
B16101734-008	SFL MW-6	10/19/16 15:17 1	0/21/16 Gro	ound Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Date: 11/10/16

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: B16101734 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B16101734-001 Client Sample ID: SFL MW-4

Report Date: 11/10/16 Collection Date: 10/19/16 09:13 DateReceived: 10/21/16

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
рН	6.5	s.u.	Н	0.1	A4500-H B	10/23/16 17:06 / Idv
Solids, Total Dissolved TDS @ 180 C	5850	mg/L	D	100	A2540 C	10/24/16 11:38 / ks
INORGANICS						
Chloride	1750	mg/L	D	6	E300.0	10/28/16 03:52 / jpv
Sulfate	2190	mg/L	D	20	E300.0	10/28/16 03:52 / jpv
Fluoride	ND	mg/L		0.1	A4500-F C	10/26/16 11:46 / cjm
CATIONS						
Calcium	826	mg/L		1	E200.7	10/27/16 01:41 / jh
Magnesium	126	mg/L		1	E200.7	10/27/16 01:41 / jh
Potassium	56	mg/L		1	E200.7	10/27/16 01:41 / jh
Sodium	1090	mg/L	D	4	E200.7	10/27/16 01:41 / jh
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/25/16 17:09 / jpv
Arsenic	ND	mg/L		0.01	E200.8	10/26/16 20:45 / jpv
Barium	0.03	mg/L		0.01	E200.8	10/25/16 17:09 / jpv
Beryllium	ND	mg/L		0.001	E200.8	10/25/16 17:09 / jpv
Boron	0.69	mg/L		0.05	E200.7	10/27/16 01:41 / jh
Cadmium	ND	mg/L		0.01	E200.8	10/25/16 17:09 / jpv
Chromium	ND	mg/L		0.01	E200.8	10/26/16 20:45 / jpv
Cobalt	ND	mg/L		0.02	E200.8	10/25/16 17:09 / jpv
Lead	ND	mg/L		0.01	E200.8	10/25/16 17:09 / jpv
Lithium	0.52	-	D	0.02	E200.7	10/27/16 01:41 / jh
Mercury	ND	mg/L		0.001	E245.1	10/25/16 13:45 / mas
Molybdenum	ND	mg/L		0.05	E200.8	10/25/16 17:09 / jpv
Selenium	ND	mg/L		0.01	E200.8	10/26/16 20:45 / jpv
Thallium	ND	mg/L		0.01	E200.8	10/25/16 17:09 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	1.1	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 226 precision (±)	0.30	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 226 MDC	0.19	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 228	3.2	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 228 precision (±)	1.2	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 228 MDC	1.2	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 226 + Radium 228	4.2	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B16101734-002 Client Sample ID: SFL MW-3

Report Date: 11/10/16 Collection Date: 10/19/16 10:37 DateReceived: 10/21/16

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	3.8	s.u.	Н	0.1		A4500-H B	10/23/16 14:53 / ldv
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	10/24/16 11:39 / ks
	0010	9/ =	J	.00		7120100	10/2 I/ 10 11.00 / R0
NORGANICS			_				
Chloride		mg/L	D	6		E300.0	10/28/16 04:06 / jpv
Sulfate		mg/L	D	20		E300.0	10/28/16 04:06 / jpv
Fluoride	0.5	mg/L		0.1		A4500-F C	10/26/16 11:54 / cjm
CATIONS							
Calcium	727	mg/L		1		E200.7	10/27/16 01:45 / jh
/lagnesium	135	mg/L		1		E200.7	10/27/16 01:45 / jh
Potassium	55	mg/L		1		E200.7	10/27/16 01:45 / jh
Sodium	954	mg/L	D	4		E200.7	10/27/16 01:45 / jh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/25/16 17:12 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/25/16 17:12 / jpv
Barium	0.05	mg/L		0.01		E200.8	10/25/16 17:12 / jpv
Beryllium	0.034	mg/L		0.001		E200.8	10/25/16 17:12 / jpv
Boron	2.87	mg/L		0.05		E200.7	10/27/16 01:45 / jh
Cadmium	ND	mg/L		0.01		E200.8	10/25/16 17:12 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/26/16 20:47 / jpv
Cobalt	0.07	mg/L		0.02		E200.8	10/25/16 17:12 / jpv
.ead	0.03	mg/L		0.01		E200.8	10/25/16 17:12 / jpv
ithium	0.44	mg/L	D	0.02		E200.7	10/27/16 01:45 / jh
Mercury	0.003	mg/L		0.001		E245.1	10/25/16 13:51 / mas
Nolybdenum	ND	mg/L		0.05		E200.8	10/25/16 17:12 / jpv
Selenium	ND	mg/L		0.01		E200.8	10/26/16 20:47 / jpv
hallium	ND	mg/L		0.01		E200.8	10/25/16 17:12 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	4.1	pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 226 precision (±)	0.89	pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 226 MDC		pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 228	5.9	pCi/L				RA-05	11/02/16 09:13 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	11/02/16 09:13 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	11/02/16 09:13 / eli-ca
Radium 226 + Radium 228	10.0	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	1.8	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B16101734-004 Client Sample ID: SFL MW-2

Report Date: 11/10/16 **Collection Date:** 10/19/16 13:50 **DateReceived:** 10/21/16

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
На	6.4	s.u.	Н	0.1	A4500-H B	10/23/16 17:14 / Idv
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100	A2540 C	10/24/16 11:39 / ks
INORGANICS						
Chloride	2790	mg/L	D	6	E300.0	10/28/16 05:02 / jpv
Sulfate		mg/L	D	20	E300.0	10/28/16 05:02 / jpv
Fluoride		mg/L	_	0.1	A4500-F C	10/26/16 12:07 / cjm
CATIONS						
Calcium	944	mg/L		1	E200.7	10/27/16 01:52 / jh
Magnesium		mg/L		1	E200.7	10/27/16 01:52 / jh
Potassium		mg/L		1	E200.7	10/27/16 01:52 / jh
Sodium		mg/L	D	4	E200.7	10/27/16 01:52 / jh
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/25/16 17:25 / jpv
Arsenic		mg/L		0.01	E200.8	10/26/16 20:52 / jpv
Barium	0.03	mg/L		0.01	E200.8	10/25/16 17:25 / jpv
Beryllium	0.002	mg/L		0.001	E200.8	10/25/16 17:25 / jpv
Boron	0.57	mg/L		0.05	E200.7	10/27/16 01:52 / jh
Cadmium	ND	mg/L		0.01	E200.8	10/25/16 17:25 / jpv
Chromium	ND	mg/L		0.01	E200.8	10/26/16 20:52 / jpv
Cobalt	0.02	mg/L		0.02	E200.8	10/25/16 17:25 / jpv
Lead	ND	mg/L		0.01	E200.8	10/25/16 17:25 / jpv
Lithium	0.58	mg/L	D	0.02	E200.7	10/27/16 01:52 / jh
Mercury	ND	mg/L		0.001	E245.1	10/25/16 13:55 / mas
Molybdenum	ND	mg/L		0.05	E200.8	10/25/16 17:25 / jpv
Selenium	ND	mg/L		0.01	E200.8	10/26/16 20:52 / jpv
Thallium	ND	mg/L		0.01	E200.8	10/25/16 17:25 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	4.3	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 226 precision (±)	0.91	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 226 MDC	0.20	pCi/L			E903.0	11/07/16 11:20 / eli-ca
Radium 228	8.6	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 228 precision (±)	2.0	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 228 MDC	1.3	pCi/L			RA-05	11/02/16 09:13 / eli-ca
Radium 226 + Radium 228	12.9	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	2.2	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

4DO Minimum data table and a

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B16101734-005

Client Sample ID: Dup-2

Report Date: 11/10/16 Collection Date: 10/19/16 DateReceived: 10/21/16

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
H	6.6	s.u.	Н	0.1		A4500-H B	10/23/16 17:17 / ldv
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	10/24/16 11:39 / ks
	0.120	9, =	J	100		7120100	10/2 I/ 10 11.00 / No
NORGANICS	4=00		_				10/00/10 05 10 //
Chloride		mg/L	D	6		E300.0	10/28/16 05:16 / jpv
Sulfate		mg/L	D	20		E300.0	10/28/16 05:16 / jpv
Fluoride	ND	mg/L		0.1		A4500-F C	10/26/16 12:11 / cjm
CATIONS							
Calcium	838	mg/L		1		E200.7	10/27/16 01:56 / jh
/lagnesium	127	mg/L		1		E200.7	10/27/16 01:56 / jh
Potassium	58	mg/L		1		E200.7	10/27/16 01:56 / jh
Sodium	1120	mg/L	D	4		E200.7	10/27/16 01:56 / jh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/25/16 17:28 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/26/16 20:55 / jpv
Barium	0.03	mg/L		0.01		E200.8	10/25/16 17:28 / jpv
Beryllium	ND	mg/L		0.001		E200.8	10/25/16 17:28 / jpv
Boron	0.66	mg/L		0.05		E200.7	10/27/16 01:56 / jh
Cadmium	ND	mg/L		0.01		E200.8	10/25/16 17:28 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/26/16 20:55 / jpv
Cobalt	ND	mg/L		0.02		E200.8	10/25/16 17:28 / jpv
.ead	ND	mg/L		0.01		E200.8	10/25/16 17:28 / jpv
ithium	0.54	mg/L	D	0.02		E200.7	10/27/16 01:56 / jh
Mercury	ND	mg/L		0.001		E245.1	10/25/16 13:57 / mas
Nolybdenum	ND	mg/L		0.05		E200.8	10/25/16 17:28 / jpv
Selenium	ND	mg/L		0.01		E200.8	10/26/16 20:55 / jpv
hallium	ND	mg/L		0.01		E200.8	10/25/16 17:28 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.1	pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 226 precision (±)	0.30	pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	11/07/16 11:20 / eli-ca
Radium 228	2.6	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 226 + Radium 228	3.7	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B16101734-006 **Client Sample ID:** EQBK-101916

Report Date: 11/10/16

Collection Date: 10/19/16 13:00

DateReceived: 10/21/16

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.3	s.u.	Н	0.1		A4500-H B	10/23/16 17:19 / ldv
Solids, Total Dissolved TDS @ 180 C		mg/L	•	10		A2540 C	10/24/16 11:39 / ks
_		3					
INORGANICS							10/00/10 05 50 //
Chloride		mg/L		1		E300.0	10/28/16 05:58 / jpv
Sulfate Fluoride		mg/L		1 0.1		E300.0 A4500-F C	10/28/16 05:58 / jpv
riuoride	ND	mg/L		0.1		A4500-F C	10/26/16 12:20 / cjm
CATIONS							
Calcium	ND	mg/L		1		E200.7	10/27/16 02:52 / jh
Magnesium	ND	mg/L		1		E200.7	10/27/16 02:52 / jh
Potassium	ND	mg/L		1		E200.7	10/27/16 02:52 / jh
Sodium	ND	mg/L		1		E200.7	10/27/16 02:52 / jh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/25/16 17:58 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/26/16 21:23 / jpv
Barium	ND	mg/L		0.01		E200.8	10/25/16 17:58 / jpv
Beryllium	ND	mg/L		0.001		E200.8	10/25/16 17:58 / jpv
Boron	ND	mg/L		0.05		E200.7	10/27/16 02:52 / jh
Cadmium	ND	mg/L		0.01		E200.8	10/25/16 17:58 / jpv
Chromium		mg/L		0.01		E200.8	10/26/16 21:23 / jpv
Cobalt		mg/L		0.02		E200.8	10/25/16 17:58 / jpv
Lead		mg/L		0.01		E200.8	10/25/16 17:58 / jpv
Lithium		mg/L		0.01		E200.7	10/27/16 02:52 / jh
Mercury		mg/L		0.001		E245.1	10/25/16 13:59 / mas
Molybdenum		mg/L		0.05		E200.8	10/25/16 17:58 / jpv
Selenium		mg/L		0.01		E200.8	10/26/16 21:23 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/25/16 17:58 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.18	pCi/L	U			E903.0	11/07/16 12:59 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	11/07/16 12:59 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	11/07/16 12:59 / eli-ca
Radium 228	0.79	pCi/L	U			RA-05	11/02/16 09:13 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	11/02/16 09:13 / eli-ca
Radium 228 MDC		pCi/L				RA-05	11/02/16 09:13 / eli-ca
Radium 226 + Radium 228		•	U			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B16101734-007 Client Sample ID: SFL MW-5

Report Date: 11/10/16 Collection Date: 10/19/16 14:30 DateReceived: 10/21/16

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Hq	4.9	s.u.	Н	0.1		A4500-H B	10/23/16 17:22 / Idv
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	10/24/16 11:39 / ks
INORGANICS							
Chloride	3070	mg/L	D	10		E300.0	10/28/16 06:12 / jpv
Sulfate		mg/L	D	40		E300.0	10/28/16 06:12 / jpv
Fluoride		mg/L		0.1		A4500-F C	10/26/16 12:26 / cjm
CATIONS							
Calcium	903	mg/L		1		E200.7	10/27/16 02:56 / jh
Magnesium		mg/L		1		E200.7	10/27/16 02:56 / jh
Potassium		mg/L		1		E200.8	10/26/16 21:26 / jpv
Sodium		mg/L	D	7		E200.7	10/27/16 02:56 / jh
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	10/25/16 18:00 / jpv
Arsenic	ND	mg/L		0.01		E200.8	10/26/16 21:26 / jpv
Barium	0.06	mg/L		0.01		E200.8	10/25/16 18:00 / jpv
Beryllium	0.010	mg/L		0.001		E200.8	10/25/16 18:00 / jpv
Boron	3.74	mg/L	D	0.07		E200.7	10/27/16 02:56 / jh
Cadmium	ND	mg/L		0.01		E200.8	10/25/16 18:00 / jpv
Chromium	ND	mg/L		0.01		E200.8	10/26/16 21:26 / jpv
Cobalt	0.05	mg/L		0.02		E200.8	10/25/16 18:00 / jpv
Lead	ND	mg/L		0.01		E200.8	10/25/16 18:00 / jpv
Lithium	0.90	mg/L	D	0.04		E200.7	10/27/16 02:56 / jh
Mercury	ND	mg/L		0.001		E245.1	10/25/16 14:00 / mas
Molybdenum	ND	mg/L		0.05		E200.8	10/25/16 18:00 / jpv
Selenium	ND	mg/L		0.01		E200.8	10/26/16 21:26 / jpv
Thallium	ND	mg/L		0.01		E200.8	10/25/16 18:00 / jpv
RADIONUCLIDES - TOTAL							
Radium 226		pCi/L				E903.0	11/07/16 12:59 / eli-ca
Radium 226 precision (±)	1.0	pCi/L				E903.0	11/07/16 12:59 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	11/07/16 12:59 / eli-ca
Radium 228	6.5	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	11/02/16 10:57 / eli-ca
Radium 226 + Radium 228	11.5	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B16101734-008 **Client Sample ID:** SFL MW-6

Report Date: 11/10/16

Collection Date: 10/19/16 15:17

DateReceived: 10/21/16

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
PHYSICAL PROPERTIES						
pH	4 2	s.u.	Н	0.1	A4500-H B	10/23/16 17:25 / ldv
Solids, Total Dissolved TDS @ 180 C	8170		D	100	A2540 C	10/24/16 11:39 / ks
_						
INORGANICS						
Chloride		mg/L	D	10	E300.0	10/28/16 06:26 / jpv
Sulfate		mg/L	D	40	E300.0	10/28/16 06:26 / jpv
Fluoride	0.8	mg/L		0.1	A4500-F C	10/26/16 12:35 / cjm
CATIONS						
Calcium	983	mg/L		1	E200.7	10/27/16 03:00 / jh
Magnesium	263	mg/L		1	E200.7	10/27/16 03:00 / jh
Potassium	88	mg/L		1	E200.8	10/26/16 21:29 / jpv
Sodium	2070	mg/L		1	E200.8	10/26/16 21:29 / jpv
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	10/25/16 18:03 / jpv
Arsenic	ND	mg/L		0.01	E200.8	10/25/16 18:03 / jpv
Barium	0.06	mg/L		0.01	E200.8	10/25/16 18:03 / jpv
Beryllium	0.051	mg/L		0.001	E200.8	10/25/16 18:03 / jpv
Boron	0.41	mg/L	D	0.07	E200.7	10/27/16 03:00 / jh
Cadmium	0.01	mg/L		0.01	E200.8	10/25/16 18:03 / jpv
Chromium	0.01	mg/L		0.01	E200.8	10/26/16 21:29 / jpv
Cobalt	0.12	mg/L		0.02	E200.8	10/25/16 18:03 / jpv
Lead	ND	mg/L		0.01	E200.8	10/25/16 18:03 / jpv
Lithium	0.88	mg/L	D	0.04	E200.7	10/27/16 03:00 / jh
Mercury	ND	mg/L		0.001	E245.1	10/25/16 14:02 / mas
Molybdenum	ND	mg/L		0.05	E200.8	10/25/16 18:03 / jpv
Selenium		mg/L		0.01	E200.8	10/26/16 21:29 / jpv
Thallium	ND	mg/L		0.01	E200.8	10/25/16 18:03 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	4.5	pCi/L			E903.0	11/07/16 12:59 / eli-ca
Radium 226 precision (±)	0.95	pCi/L			E903.0	11/07/16 12:59 / eli-ca
Radium 226 MDC	0.20	pCi/L			E903.0	11/07/16 12:59 / eli-ca
Radium 228	6.3	pCi/L			RA-05	11/02/16 10:57 / eli-ca
Radium 228 precision (±)	1.6	pCi/L			RA-05	11/02/16 10:57 / eli-ca
Radium 228 MDC	1.5	pCi/L			RA-05	11/02/16 10:57 / eli-ca
Radium 226 + Radium 228	10.8	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L			A7500-RA	11/08/16 10:25 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L			A7500-RA	11/08/16 10:25 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Minimum data table and

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:11/08/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA	226-8300
Lab ID:	LCS-RA226-8300	Lab	oratory Cor	ntrol Sample			Run: G542I	M_161025A		11/07/	/16 11:20
Radium 22	26		11	pCi/L		107	80	120			
Lab ID:	MB-RA226-8300	3 Me	thod Blank				Run: G542I	M_161025A		11/07/	/16 11:20
Radium 22	26		0.07	pCi/L							U
Radium 22	26 precision (±)		0.1	pCi/L							
Radium 22	26 MDC		0.2	pCi/L							
Lab ID:	B16101734-001CMS	Sar	mple Matrix	Spike			Run: G542I	M_161025A		11/07/	/16 11:20
Radium 22	26		20	pCi/L		94	70	130			
Lab ID:	B16101734-001CMSI	D Sar	mple Matrix	Spike Duplicate			Run: G542I	M_161025A		11/07/	/16 11:20
Radium 22	26		22	pCi/L		103	70	130	9.1	20	

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:11/08/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: RA	228-5349
Lab ID:	LCS-228-RA226-8300	Lab	oratory Cor	ntrol Sample			Run: TENN	IELEC-3_161025	iΑ	11/02/	/16 09:13
Radium 22	28		7.3	pCi/L		85	80	120			
Lab ID:	MB-RA226-8300	3 Met	thod Blank				Run: TENN	ELEC-3_161025	iΑ	11/02/	/16 09:13
Radium 22	28		0.05	pCi/L							U
Radium 22	28 precision (±)		8.0	pCi/L							
Radium 22	28 MDC		1	pCi/L							
Lab ID:	B16101734-006CMS	Sar	nple Matrix	Spike			Run: TENN	ELEC-3_161025	iΑ	11/02/	/16 09:13
Radium 22	28		15.1	pCi/L		82	70	130			
Lab ID:	B16101734-006CMSE) Sar	mple Matrix	Spike Duplicate			Run: TENN	ELEC-3_161025	iΑ	11/02/	/16 09:13
Radium 22	28		16.0	pCi/L		87	70	130	5.9	20	

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Analy	/tical Ru	n: ICP203-B	_161026 <i>A</i>
Lab ID:	ICV	6 C	ontinuing Cali	bration Verifica	tion Standa	rd				10/26	16 15:28
Boron			2.46	mg/L	0.10	98	95	105			
Calcium			25.0	mg/L	1.0	100	95	105			
Lithium			1.27	mg/L	0.10	101	95	105			
Magnesiur	m		25.5	mg/L	1.0	102	95	105			
Potassium	1		25.4	mg/L	1.0	102	95	105			
Sodium			25.4	mg/L	1.0	102	95	105			
Method:	E200.7									Batc	h: 103856
Lab ID:	MB-103856	6 M	lethod Blank				Run: ICP20	3-B_161026A		10/27	16 00:27
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.03						
Lithium			0.005	mg/L	0.002						
Magnesiur	m		ND	mg/L	0.004						
Potassium			ND	mg/L	0.08						
Sodium			ND	mg/L	0.02						
Lab ID:	LCS-103856	6 La	aboratory Cor	ntrol Sample			Run: ICP20	3-B 161026A		10/27	16 00:31
Boron			0.507	mg/L	0.10	101	85	_ 115			
Calcium			26.7	mg/L	1.0	107	85	115			
Lithium			0.532	mg/L	0.10	105	85	115			
Magnesiur	n		26.6	mg/L	1.0	106	85	115			
Potassium			26.3	mg/L	1.0	105	85	115			
Sodium			26.6	mg/L	1.0	107	85	115			
Lab ID:	B16101734-005BMS3	8 6 S	ample Matrix	Spike			Run: ICP20	3-B_161026A		10/27	16 02:06
Boron			1.12	mg/L	0.050	91	70	130			
Calcium			819	mg/L	1.0		70	130			Α
Lithium			1.03	mg/L	0.10	99	70	130			
Magnesiur	m		147	mg/L	1.0		70	130			Α
Potassium	1		81.1	mg/L	1.0	92	70	130			
Sodium			1090	mg/L	3.7		70	130			Α
Lab ID:	B16101734-005BMSI	6 6 8	ample Matrix	Spike Duplicate	;		Run: ICP20	3-B_161026A		10/27	16 02:10
Boron			1.23	mg/L	0.050	115	70	130	10	20	
Calcium			878	mg/L	1.0		70	130	6.9	20	Α
Lithium			1.08	mg/L	0.10	110	70	130	4.8	20	
Magnesiur	m		157	mg/L	1.0		70	130	6.5	20	Α
Potassium			86.2	mg/L	1.0	112	70	130	6.1	20	
Sodium			1160	mg/L	3.7		70	130	6.5	20	Α
Method:	E200.7									Batc	h: 103857
Lab ID:	MB-103857	6 M	lethod Blank				Run: ICP20	3-B_161026A		10/27	16 02:45
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.03						
0 0.10.10.11.											

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 103857
Lab ID:	MB-103857	6 Me	thod Blank				Run: ICP20	3-B_161026A		10/27/	16 02:45
Magnesiun	n		ND	mg/L	0.004						
Potassium			ND	mg/L	0.08						
Sodium			ND	mg/L	0.02						
Lab ID:	LCS-103857	6 Lal	boratory Cor	ntrol Sample			Run: ICP20	3-B_161026A		10/27/	16 02:49
Boron			0.479	mg/L	0.10	96	85	115			
Calcium			25.3	mg/L	1.0	101	85	115			
Lithium			0.509	mg/L	0.10	101	85	115			
Magnesiun	n		25.2	mg/L	1.0	101	85	115			
Potassium			25.3	mg/L	1.0	101	85	115			
Sodium			25.1	mg/L	1.0	100	85	115			
Lab ID:	B16101754-003CMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_161026A		10/27/	16 03:28
Boron			0.571	mg/L	0.050	99	70	130			
Calcium			30.0	mg/L	1.0	102	70	130			
Lithium			0.524	mg/L	0.10	101	70	130			
Magnesiun	n		26.7	mg/L	1.0	101	70	130			
Potassium			27.2	mg/L	1.0	101	70	130			
Sodium			309	mg/L	1.0		70	130			Α
Lab ID:	B16101754-003CMSE	o 6 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_161026A		10/27/	16 03:32
Boron			0.572	mg/L	0.050	99	70	130	0.2	20	
Calcium			29.7	mg/L	1.0	101	70	130	0.9	20	
Lithium			0.520	mg/L	0.10	100	70	130	0.7	20	
Magnesiun	n		26.6	mg/L	1.0	100	70	130	0.7	20	
Potassium			27.0	mg/L	1.0	100	70	130	0.7	20	
Sodium			304	mg/L	1.0		70	130	1.7	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS202-B_	_161025A
Lab ID:	QCS	9 Init	ial Calibratio	on Verificatio	n Standard					10/25/	16 12:58
Antimony			0.0506	mg/L	0.050	101	90	110			
Arsenic			0.0505	mg/L	0.0050	101	90	110			
Barium			0.0496	mg/L	0.10	99	90	110			
Beryllium			0.0245	mg/L	0.0010	98	90	110			
Cadmium			0.0255	mg/L	0.0010	102	90	110			
Cobalt			0.0503	mg/L	0.010	101	90	110			
Lead			0.0508	mg/L	0.010	102	90	110			
Molybdenu	m		0.0471	mg/L	0.0050	94	90	110			
Thallium			0.0490	mg/L	0.10	98	90	110			
Method:	E200.8									Batcl	h: 103856
Lab ID:	MB-103856	11 Me	thod Blank				Run: ICPM	S202-B_161025A		10/25/	16 15:56
Antimony			3E-05	mg/L	3E-05						
Arsenic			ND	mg/L	0.0001						
Barium			ND	mg/L	7E-05						
Beryllium			ND	mg/L	1E-05						
Cadmium			ND	mg/L	1E-05						
Chromium			ND	mg/L	8E-05						
Cobalt			ND	mg/L	2E-05						
Lead			ND	mg/L	4E-05						
Molybdenu	m		ND	mg/L	4E-05						
Selenium			ND	mg/L	0.0002						
Thallium			4E-05	mg/L	1E-05						
Lab ID:	LCS-103856	11 Lab	oratory Cor	ntrol Sample			Run: ICPM	S202-B_161025A		10/25/	16 15:59
Antimony			0.507	mg/L	0.0050	101	85	115			
Arsenic			0.504	mg/L	0.0010	101	85	115			
Barium			0.503	mg/L	0.010	101	85	115			
Beryllium			0.233	mg/L	0.0010	93	85	115			
Cadmium			0.258	mg/L	0.0010	103	85	115			
Chromium			0.445	mg/L	0.0010	89	85	115			
Cobalt			0.452	mg/L	0.0010	90	85	115			
Lead			0.491	mg/L	0.0010	98	85	115			
Molybdenu	m		0.497	mg/L	0.0050	99	85	115			
Selenium			0.502	mg/L	0.0050	100	85	115			
Thallium			0.477	mg/L	0.0010	95	85	115			
Lab ID:	B16101734-005BMS	3 11 Sai	mple Matrix	Spike			Run: ICPM	S202-B_161025A		10/25/	16 17:31
Antimony			0.532	mg/L	0.0010	106	70	130			
Arsenic			0.508	mg/L	0.0010	101	70	130			
Barium			0.545	mg/L	0.050	103	70	130			
Beryllium			0.220	mg/L	0.0010	88	70	130			
Cadmium			0.238	mg/L	0.0010	95	70	130			
Chromium			0.458	mg/L	0.0050	91	70	130			
Cobalt			0.467	mg/L	0.0050	93	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 103856
Lab ID:	B16101734-005BMS	3 11 Sam	nple Matrix	Spike			Run: ICPM	S202-B_161025	A	10/25	/16 17:31
Lead			0.512	mg/L	0.0010	102	70	130			
Molybdenu	ım		0.493	mg/L	0.0010	99	70	130			
Selenium			0.481	mg/L	0.0010	95	70	130			
Thallium			0.495	mg/L	0.00050	99	70	130			
Lab ID:	B16101734-005BMSI	D 11 Sam	nple Matrix	Spike Dupli	icate		Run: ICPM	S202-B_161025	A	10/25	/16 17:33
Antimony			0.517	mg/L	0.0010	103	70	130	2.8	20	
Arsenic			0.505	mg/L	0.0010	101	70	130	0.5	20	
Barium			0.530	mg/L	0.050	100	70	130	3.0	20	
Beryllium			0.213	mg/L	0.0010	85	70	130	3.0	20	
Cadmium			0.235	mg/L	0.0010	94	70	130	1.4	20	
Chromium			0.453	mg/L	0.0050	90	70	130	1.2	20	
Cobalt			0.459	mg/L	0.0050	92	70	130	1.7	20	
Lead			0.506	mg/L	0.0010	101	70	130	1.0	20	
Molybdenu	ım		0.491	mg/L	0.0010	98	70	130	0.4	20	
Selenium			0.478	mg/L	0.0010	95	70	130	0.6	20	
Thallium			0.476	mg/L	0.00050	95	70	130	3.9	20	
Method:	E200.8									Batc	h: 10385
Lab ID:	MB-103857	11 Metl	hod Blank				Run: ICPM	S202-B 161025	A	10/25	/16 17:42
Antimony			ND	mg/L	3E-05			_			
Arsenic			ND	mg/L	0.0001						
Barium			7E-05	mg/L	7E-05						
Beryllium			ND	mg/L	1E-05						
Cadmium			ND	mg/L	1E-05						
Chromium			ND	mg/L	8E-05						
Cobalt			ND	mg/L	2E-05						
Lead			5E-05	mg/L	4E-05						
Molybdenu	ım		6E-05	mg/L	4E-05						
Selenium			0.0002	mg/L	0.0002						
Thallium			0.0001	mg/L	1E-05						
Lab ID:	LCS-103857	11 Lab	oratory Co	ntrol Sample	е		Run: ICPM	S202-B_161025	A	10/25	/16 17:44
Antimony			0.519	mg/L	0.0050	104	85	_ 115			
Arsenic			0.494	mg/L	0.0010	99	85	115			
Barium			0.509	mg/L	0.010	102	85	115			
Beryllium			0.228	mg/L	0.0010	91	85	115			
Cadmium			0.243	mg/L	0.0010	97	85	115			
Chromium			0.429	mg/L	0.0010	86	85	115			
Cobalt			0.445	mg/L	0.0010	89	85	115			
Lead			0.499	mg/L	0.0010	100	85	115			
Molybdenu	ım		0.490	mg/L	0.0050	98	85	115			
Selenium			0.490	mg/L	0.0050	98	85	115			
Thallium			0.474	mg/L	0.0030	95	85	115			
maniani			V. TI T	⊎, ⊏	0.0010	00	00	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 103857
Lab ID:	B16101754-003CMS3	3 11 Sa	mple Matrix	Spike			Run: ICPM	S202-B_161025A		10/25/	16 18:14
Antimony			0.510	mg/L	0.0010	102	70	130			
Arsenic			0.494	mg/L	0.0010	99	70	130			
Barium			0.587	mg/L	0.050	101	70	130			
Beryllium			0.214	mg/L	0.0010	86	70	130			
Cadmium			0.233	mg/L	0.0010	93	70	130			
Chromium			0.461	mg/L	0.0050	92	70	130			
Cobalt			0.472	mg/L	0.0050	94	70	130			
Lead			0.499	mg/L	0.0010	100	70	130			
Molybdenu	m		0.480	mg/L	0.0010	96	70	130			
Selenium			0.462	mg/L	0.0010	93	70	130			
Thallium			0.481	mg/L	0.00050	96	70	130			
Lab ID:	B16101754-003CMSI	D 11 Sa	mple Matrix	Spike Dup	olicate		Run: ICPM	S202-B_161025A		10/25/	16 18:16
Antimony			0.514	mg/L	0.0010	103	70	130	8.0	20	
Arsenic			0.488	mg/L	0.0010	98	70	130	1.2	20	
Barium			0.595	mg/L	0.050	103	70	130	1.3	20	
Beryllium			0.222	mg/L	0.0010	89	70	130	3.8	20	
Cadmium			0.238	mg/L	0.0010	95	70	130	2.2	20	
Chromium			0.451	mg/L	0.0050	90	70	130	2.1	20	
Cobalt			0.456	mg/L	0.0050	91	70	130	3.3	20	
Lead			0.499	mg/L	0.0010	100	70	130	0.1	20	
Molybdenu	m		0.505	mg/L	0.0010	101	70	130	5.1	20	
Selenium			0.461	mg/L	0.0010	92	70	130	0.3	20	
Thallium			0.486	mg/L	0.00050	97	70	130	1.2	20	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	l Run: I	CPMS206-B_	_161026A
Lab ID:	QCS	5 Initia	al Calibration	on Verificatio	on Standard					10/26/	16 19:48
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Chromium			0.0507	mg/L	0.010	101	90	110			
Potassium			2.55	mg/L	0.50	102	90	110			
Selenium			0.0501	mg/L	0.0050	100	90	110			
Sodium			2.47	mg/L	0.50	99	90	110			
Method:	E200.8									Batcl	h: 103856
Lab ID:	MB-103856	12 Metl	nod Blank				Run: ICPM	S206-B_161026	A	10/26/	16 20:01
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Barium			ND	mg/L	9E-05						
Beryllium			2E-05	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenui	m		3E-05	mg/L	3E-05						
Potassium			0.01	mg/L	0.009						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-103856	12 Lab	oratory Co	ntrol Sample	!		Run: ICPM	S206-B_161026	A	10/26/	16 20:06
Antimony			0.530	mg/L	0.0050	106	85	115			
Arsenic			0.499	mg/L	0.0010	100	85	115			
Barium			0.535	mg/L	0.010	107	85	115			
Beryllium			0.262	mg/L	0.0010	105	85	115			
Cadmium			0.252	mg/L	0.0010	101	85	115			
Chromium			0.488	mg/L	0.0010	98	85	115			
Cobalt			0.513	mg/L	0.0010	103	85	115			
Lead			0.532	mg/L	0.0010	106	85	115			
Molybdenui	m		0.526	mg/L	0.0050	105	85	115			
Potassium			25.2	mg/L	1.0	101	85	115			
Selenium			0.481	mg/L	0.0050	96	85	115			
Thallium			0.521	mg/L	0.0010	104	85	115			
Lab ID:	B16101734-005BMS3	3 12 Sam	ple Matrix	Spike			Run: ICPM	S206-B_161026	A	10/26/	16 20:58
Antimony			0.522	mg/L	0.0010	104	70	_ 130			
Arsenic			0.514	mg/L	0.0010	103	70	130			
Barium			0.537	mg/L	0.050	102	70	130			
Beryllium			0.245	mg/L	0.0010	98	70	130			
Cadmium			0.245	mg/L	0.0010	98	70	130			
Chromium			0.502	mg/L	0.0050	100	70	130			
Cobalt			0.502	mg/L	0.0050	104	70	130			
JUDUIL				mg/L		104	70	130			
Lead			0.507	ma/i	0.0010	7117	/!!	1 (1)			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 103856
Lab ID:	B16101734-005BMS3	12 Sam	ple Matrix	Spike			Run: ICPM	S206-B_161026	Ą	10/26	/16 20:58
Potassium			82.9	mg/L	1.0	115	70	130			
Selenium			0.495	mg/L	0.0021	99	70	130			
Thallium			0.462	mg/L	0.00050	92	70	130			
Lab ID:	B16101734-005BMSE) 12 Sam	ple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_161026	A	10/26	/16 21:08
Antimony			0.510	mg/L	0.0010	102	70	130	2.4	20	
Arsenic			0.504	mg/L	0.0010	101	70	130	1.9	20	
Barium			0.531	mg/L	0.050	101	70	130	1.1	20	
Beryllium			0.247	mg/L	0.0010	99	70	130	1.0	20	
Cadmium			0.239	mg/L	0.0010	95	70	130	2.4	20	
Chromium			0.493	mg/L	0.0050	99	70	130	1.6	20	
Cobalt			0.505	mg/L	0.0050	101	70	130	2.5	20	
Lead			0.505	mg/L	0.0010	101	70	130	0.4	20	
Molybdenu	m		0.518	mg/L	0.0010	104	70	130	1.5	20	
Potassium			82.3	mg/L	1.0	113	70	130	0.7	20	
Selenium			0.475	mg/L	0.0021	95	70	130	4.0	20	
Thallium			0.459	mg/L	0.00050	92	70	130	0.6	20	
Method:	E200.8									Batc	h: 103857
Lab ID:	MB-103857	13 Meth	od Blank				Run: ICPM	S206-B_161026	A	10/26	/16 21:16
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Barium			ND	mg/L	9E-05						
Beryllium			1E-05	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	m		ND	mg/L	3E-05						
Potassium			0.05	mg/L	0.009						
Selenium			ND	mg/L	0.0004						
Sodium			0.04	mg/L	0.005						
Thallium			0.0001	mg/L	1.0E-05						
Lab ID:	LCS-103857	13 Labo	oratory Co	ntrol Sample)		Run: ICPM	S206-B_161026/	Ą	10/26	/16 21:18
Antimony			0.524	mg/L	0.0050	105	85	115			
Arsenic			0.500	mg/L	0.0010	100	85	115			
Barium			0.513	mg/L	0.010	103	85	115			
Beryllium			0.249	mg/L	0.0010	99	85	115			
Cadmium			0.245	mg/L	0.0010	98	85	115			
Chromium			0.493	mg/L	0.0010	99	85	115			
Cobalt			0.511	mg/L	0.0010	102	85	115			
Lead			0.511	mg/L	0.0010	102	85	115			
Molybdenu	m		0.531	mg/L	0.0050	106	85	115			
,				mg/L		107	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:11/10/16Project:CCRRWork Order:B16101734

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	h: 103857
Lab ID:	LCS-103857	13 La	boratory Co	ntrol Sample	Э		Run: ICPM	S206-B_161026A		10/26/	16 21:18
Selenium			0.487	mg/L	0.0050	97	85	115			
Sodium			25.2	mg/L	1.0	101	85	115			
Thallium			0.498	mg/L	0.0010	100	85	115			
Lab ID:	B16101754-003CMS	3 13 Sa	mple Matrix	Spike			Run: ICPM	S206-B_161026A		10/26/	16 21:41
Antimony			0.531	mg/L	0.0010	106	70	130			
Arsenic			0.507	mg/L	0.0010	101	70	130			
Barium			0.608	mg/L	0.050	106	70	130			
Beryllium			0.265	mg/L	0.0010	106	70	130			
Cadmium			0.248	mg/L	0.0010	99	70	130			
Chromium			0.487	mg/L	0.0050	97	70	130			
Cobalt			0.550	mg/L	0.0050	110	70	130			
Lead			0.523	mg/L	0.0010	105	70	130			
Molybdenu	m		0.548	mg/L	0.0010	110	70	130			
Potassium			28.9	mg/L	1.0	108	70	130			
Selenium			0.484	mg/L	0.0010	97	70	130			
Sodium			298	mg/L	1.0		70	130			Α
Thallium			0.509	mg/L	0.00050	102	70	130			
Lab ID:	B16101754-003CMSI) 13 Sa	mple Matrix	Spike Dupl	icate		Run: ICPM	S206-B_161026A		10/26/	16 21:44
Antimony			0.524	mg/L	0.0010	105	70	130	1.4	20	
Arsenic			0.511	mg/L	0.0010	102	70	130	0.9	20	
Barium			0.591	mg/L	0.050	103	70	130	2.7	20	
Beryllium			0.252	mg/L	0.0010	101	70	130	4.8	20	
Cadmium			0.244	mg/L	0.0010	98	70	130	1.5	20	
Chromium			0.486	mg/L	0.0050	97	70	130	0.2	20	
Cobalt			0.526	mg/L	0.0050	105	70	130	4.6	20	
Lead			0.503	mg/L	0.0010	101	70	130	4.0	20	
Molybdenu	m		0.543	mg/L	0.0010	109	70	130	0.9	20	
Potassium			28.8	mg/L	1.0	107	70	130	0.3	20	
Selenium			0.480	mg/L	0.0010	96	70	130	0.9	20	
Sodium			297	mg/L	1.0		70	130	0.4	20	Α
Thallium			0.493	mg/L	0.00050	99	70	130	3.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run:	HGCV202-B	_161025A
Lab ID:	ICV	Init	ial Calibration	on Verificat	ion Standard					10/25/	16 13:24
Mercury			0.00202	mg/L	0.00010	101	90	110			
Method:	E245.1									Batcl	h: 103884
Lab ID:	MB-103884	Me	thod Blank				Run: HGCV	/202-B_161025A		10/25/	16 13:42
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-103884	Lak	ooratory Co	ntrol Sampl	e		Run: HGCV	/202-B_161025A		10/25/	16 13:43
Mercury			0.00191	mg/L	0.00010	95	85	115			
Lab ID:	B16101734-001BMS	Sai	mple Matrix	Spike			Run: HGCV	/202-B_161025A		10/25/	16 13:47
Mercury			0.00192	mg/L	0.00010	96	70	130			
Lab ID:	B16101734-001BMSI	D Sai	mple Matrix	Spike Dup	licate		Run: HGCV	/202-B_161025A		10/25/	16 13:49
Mercury			0.00192	mg/L	0.00010	96	70	130	0.0	30	

Prepared by Billings, MT Branch

Analyte	Соц	unt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2	540 C								Batch	n: 103888
Lab ID: MB	-103888	Method Blank				Run: BAL#	SD-15_161024A		10/24/	16 11:36
Solids, Total Dis	ssolved TDS @ 180 C	5	mg/L	5						
Lab ID: LCS	S-103888	Laboratory Con	trol Sample			Run: BAL #	SD-15_161024A		10/24/	16 11:37
Solids, Total Dis	ssolved TDS @ 180 C	983	mg/L	10	99	90	110			
Lab ID: B16	6101734-001A DUP	Sample Duplica	ate			Run: BAL #	SD-15_161024A		10/24/	16 11:38
Solids, Total Dis	ssolved TDS @ 180 C	5620	mg/L	98				3.9	5	
Method: A2	540 C								Batch	n: 104090
Lab ID: MB	-104090	Method Blank				Run: BAL#	SD-15_161031C		10/31/	16 11:41
Solids, Total Dis	ssolved TDS @ 180 C	ND	mg/L	5						
Lab ID: LCS	S-104090	Laboratory Con	trol Sample			Run: BAL #	SD-15_161031C		10/31/	16 11:41
Solids, Total Dis	ssolved TDS @ 180 C	972	mg/L	10	97	90	110			
Lab ID: B16	6101733-066A DUP	Sample Duplica	ate			Run: BAL #	SD-15_161031C		10/31/	16 11:41
Solids, Total Dis	ssolved TDS @ 180 C	4090	mg/L	28				1.6	5	

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	_161026A
Lab ID:	ICV	Initia	al Calibratio	on Verification S	tandard					10/26/	16 09:49
Fluoride			0.990	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch:	R269344
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_161026A		10/26/	16 09:44
Fluoride			ND	mg/L	0.03						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_161026A		10/26/	16 09:46
Fluoride			1.00	mg/L	0.10	100	90	110			
Lab ID:	B16101692-003AMS	San	nple Matrix	Spike			Run: MAN-	TECH_161026A		10/26/	16 14:04
Fluoride			1.09	mg/L	0.10	86	80	120			
Lab ID:	B16101692-003AMSI	D San	nple Matrix	Spike Duplicate)		Run: MAN-	TECH_161026A		10/26/	16 14:10
Fluoride			1.12	mg/L	0.10	89	80	120	2.7	10	

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytical	Run: Pl	HSC _101-B_	_161023A
Lab ID:	pH 8	Initi	al Calibratio	on Verifica	ation Standard					10/23	/16 13:03
рН			7.96	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cal	ibration V	erification Standaı	·d				10/23	/16 16:56
рН			7.01	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R269135
Lab ID:	B16101734-002ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_161023	BA	10/23/	/16 14:56
рН			3.82	s.u.	0.10				0.0	3	
Lab ID:	B16101734-001ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_161023	BA	10/23	/16 17:09
рН			6.48	s.u.	0.10				0.0	3	
Method:	A4500-H B							Analytical	Run: Pl	HSC _101-B	_161024A
Lab ID:	pH 8	Initi	al Calibratio	n Verifica	ation Standard					10/24	/16 08:43
pН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R269148
Lab ID:	B16101818-005ADUF	9 Sar	nple Duplica	ate			Run: PHSC	_101-B_161024	ŀΑ	10/24	/16 16:06
рН			6.38	s.u.	0.10				8.0	3	

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 1_	_161027A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification Sta	andard					10/27/	/16 11:46
Chloride			2.23	mg/L	1.0	99	90	110			
Sulfate			8.91	mg/L	1.0	99	90	110			
Method:	E300.0									Batch:	R269432
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_16	1027A	10/27/	/16 12:00
Chloride			ND	mg/L	0.008						
Sulfate			ND	mg/L	0.06						
Lab ID:	LFB	2 Lal	ooratory For	tified Blank			Run: IC ME	TROHM 1_16	1027A	10/27/	/16 12:14
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			30.7	mg/L	1.0	102	90	110			
Lab ID:	B16101733-065AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 1_16	1027A	10/28/	/16 02:13
Chloride			10.9	mg/L	1.0	109	90	110			
Sulfate			32.2	mg/L	1.0	107	90	110			
Lab ID:	B16101733-065AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1027A	10/28/	/16 02:27
Chloride			11.0	mg/L	1.0	110	90	110	0.7	20	
Sulfate			32.5	mg/L	1.0	108	90	110	0.7	20	
Lab ID:	B16101734-005AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 1_16	1027A	10/28/	/16 05:30
Chloride			2670	mg/L	6.1	94	90	110			
Sulfate			5180	mg/L	18	100	90	110			
Lab ID:	B16101734-005AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1027A	10/28/	/16 05:44
Chloride			2730	mg/L	6.1	99	90	110	2.1	20	
Sulfate			5260	mg/L	18	103	90	110	1.5	20	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Cindy Rohrer

B16101734

Date Received: 10/21/2016

Reviewed by:	BL2000\tedwards			Received by: shc
Reviewed Date:	10/24/2016		(Carrier name: Return-UPS NDA N/C
Shipping container/cooler in	good condition?	Yes √	No 🗌	Not Present
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed who	en relinquished and received?	Yes ✓	No 🗌	
Chain of custody agrees with	sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes √	No 🗌	
Sample containers intact?		Yes √	No 🗌	
Sufficient sample volume for	indicated test?	Yes √	No 🗌	
All samples received within h (Exclude analyses that are couch as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all s	nipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank tempe	erature:	8.3°C No Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	Not Applicable
Water - pH acceptable upon	receipt?	Yes √	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Per phone call between Greg Seifert with Amec Foster Wheeler and Amanda Myatt, Energy Laboratory College Station Asst Lab Manager on 10/25/16, cancel analysis of Calcium, Magnesium, Potassium and Sodium on all samples.

Company Name:		Project Name, PWS, Permit, Etc.			
Amee Foster Wheeler		TMPA	Ste		Sampler (Please Print)
Report Mail Address; of 1X Hwy. #375	Ny. #375	Contact Name: Phone/Fax: Morriss Barney			B \$/\$M
Austin, TX 78704 Invoice Address:		Invoice Contact & Phone:	512-241-2310 greg. Sei	Purchase Order: Quote/B	Quote/Bottle Order:
Special Report/Formats:		ANIALYSIS	REQUESTED	Contact ELI prior to RUSH sample submittal	Shipped by: Cooler ID(s):
WO C	EDD/EDT(Electronic Data)	Containers W S V B O E Soils/Solids oassay Other ing Water	CHED	R scheduling – See Instruction Page	Receipt Temp
State:	LEVEL IV		d Turnaro	S = 1.0y 1:1	On ice: (Y)N Custody Seal (N)
	-	N Samp Jev Jev Jev	Standar	I	On Cooler Y Intact Y Signature Y N
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Collection Date Time	MATRIX V			Match
BA 1P MW 3	10/19/16 08/5	X	*		\$ 18 C
H-MW 74S;	10/19/16 0913	3	X.		0 KE 100
SFL MW-3	1037	X.	X		3 3
'SFL MW-1	1136	X	X.		
SFL MW-2	/350	X	X		
bw-2		X	X >		
	/300	×	\\		
8 SFL MW-5	1430	×	X		
9-MM 735 °	♦ 1517	×	X		
Custody Reinquished by (print):		Signature:	1	75401 all	lignature:
Record Relinquished by (print):	MA COO 10-17-16 Date/Time:		1		Signature: Signature:
Signed Signed	description of	l ah Disnasal	Received by Laboratory:	9111001116	240

3

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ANALYTICAL SUMMARY REPORT

January 12, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B16121644 Quote ID: B3997 - CCRR

Project Name: TMPA-6706-15-0060

Energy Laboratories Inc Billings MT received the following 21 samples for Texas Municipal Power Agency on 12/22/2016 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B16121644-001	EQBK MPS-122016	12/20/16 17:50 12/22/16	Aqueous	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B16121644-002	EQBK 12-21-16/SCM	12/21/16 13:37 12/22/16	Aqueous	Same As Above
B16121644-003	SSP/AP MW-1	12/20/16 14:17 12/22/16	Aqueous	Same As Above
B16121644-004	AP-MW1D	12/21/16 12:16 12/22/16	Aqueous	Same As Above
B16121644-005	SSP-MW2	12/20/16 16:10 12/22/16	Aqueous	Same As Above
B16121644-006	SSP-MW3	12/20/16 17:20 12/22/16	Aqueous	Same As Above
B16121644-007	AP-MW4	12/21/16 10:42 12/22/16	Aqueous	Same As Above
B16121644-008	SFL-MW6	12/21/16 12:32 12/22/16	Aqueous	Same As Above
B16121644-009	AP-MW-3	12/21/16 9:16 12/23/16	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

B16121644-011	EQBK-MPS-122116	12/21/16 13:15 12/23/16	Aqueous	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B16121644-012	DUP 2	12/21/16 0:00 12/23/16	Aqueous	Same As Above
B16121644-013	SSP-MW4	12/20/16 16:52 12/23/16	Aqueous	Same As Above
B16121644-014	EQBK-12-20-16/SCM	12/20/16 18:00 12/23/16	Aqueous	Same As Above
B16121644-015	AP-MW5	12/21/16 9:06 12/23/16	Aqueous	Same As Above
B16121644-016	DUP-1	12/21/16 0:00 12/23/16	Aqueous	Same As Above
B16121644-017	SFL-MW5	12/21/16 15:39 12/23/16	Aqueous	Same As Above
B16121644-018	SFL-MW2	12/22/16 9:45 12/23/16	Aqueous	Same As Above
B16121644-019	SFL-MW3	12/22/16 11:35 12/23/16	Aqueous	Same As Above
B16121644-020	SFL-MW4	12/22/16 12:40 12/23/16	Aqueous	Same As Above
B16121644-021	EQBK 12-22-16/SCM	12/22/16 10:10 12/23/16	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: Texas Municipal Power Agency

Project: TMPA-6706-15-0060

Work Order: B16121644 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Lab ID: B16121644-001 Client Sample ID: EQBK MPS-122016

Report Date: 01/12/17 Collection Date: 12/20/16 17:50 DateReceived: 12/22/16 Matrix: Aqueous

Analyses	Result l	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND r	ma/l		1		E200.7	12/27/16 13:36 / jh
Magnesium	ND r	•		1		E200.7	12/27/16 13:36 / jh
Potassium	ND r	•		1		E200.7	12/27/16 13:36 / jh
Sodium	ND r	•		1		E200.7	12/27/16 13:36 / jh
PHYSICAL PROPERTIES							
pH	6.1 s	s.u.	Н	0.1		A4500-H B	12/22/16 16:06 / pjw
Solids, Total Dissolved TDS @ 180 C	ND r	mg/L		10		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	ND r	mg/L		1		E300.0	12/23/16 13:13 / jpv
Sulfate	ND r	mg/L		1		E300.0	12/23/16 13:13 / jpv
Fluoride	ND r	mg/L		0.1		A4500-F C	12/27/16 16:15 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND r	mg/L		0.05		E200.8	12/28/16 15:09 / jpv
Arsenic	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
Barium	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
Beryllium	ND r	mg/L		0.001		E200.8	12/23/16 15:32 / rlh
Boron	ND r	mg/L		0.05		E200.7	12/27/16 13:36 / jh
Cadmium	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
Chromium	ND r	•		0.01		E200.8	12/23/16 15:32 / rlh
Cobalt	ND r	mg/L		0.02		E200.8	12/23/16 15:32 / rlh
Lead	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
Lithium	ND r	mg/L		0.01		E200.7	12/27/16 13:36 / jh
Mercury	ND r	•		0.001		E245.1	12/23/16 12:36 / ser
Molybdenum	ND r	mg/L		0.05		E200.8	12/28/16 15:09 / jpv
Selenium	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
Thallium	ND r	mg/L		0.01		E200.8	12/23/16 15:32 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.15 p		U			E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.16 p					E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.25 p	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	0.63 p		U			RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.5 p	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.5 p					RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	0.8 p	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5 p					A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.5 p	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060

 Lab ID:
 B16121644-002

 Client Sample ID:
 EQBK 12-21-16/SCM

Report Date: 01/12/17

Collection Date: 12/21/16 13:37

DateReceived: 12/22/16

Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
	4	m a/l		4		F200.7	10/00/16 10:17 / ib
Calcium		mg/L		1 1		E200.7 E200.7	12/28/16 12:17 / jh
Magnesium Potassium		mg/L		1		E200.7 E200.7	12/28/16 12:17 / jh
Sodium		mg/L		1		E200.7 E200.7	12/28/16 12:17 / jh
Sodium	ND	mg/L		1		E200.7	12/28/16 12:17 / jh
PHYSICAL PROPERTIES							
рН	6.6	s.u.	Н	0.1		A4500-H B	12/22/16 16:11 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	ND	mg/L		1		E300.0	12/23/16 13:55 / jpv
Sulfate	ND	mg/L		1		E300.0	12/23/16 13:55 / jpv
Fluoride	ND	mg/L		0.1		A4500-F C	12/27/16 16:21 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	12/28/16 12:17 / jh
Arsenic	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Barium	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Beryllium	ND	mg/L		0.001		E200.8	12/23/16 15:36 / rlh
Boron	ND	mg/L		0.05		E200.7	12/28/16 12:17 / jh
Cadmium	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Chromium	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Cobalt	ND	mg/L		0.02		E200.8	12/23/16 15:36 / rlh
Lead	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Lithium	ND	mg/L		0.01		E200.7	12/28/16 12:17 / jh
Mercury	ND	mg/L		0.001		E245.1	12/23/16 12:37 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 12:17 / jh
Selenium	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 15:36 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.08	pCi/L	U			E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.23	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	-0.3	pCi/L	U			RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	-0.2	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.2	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

ADO ME

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060
 Collection Date:
 12/20/16 14:17

 Lab ID:
 B16121644-003
 DateReceived:
 12/22/16

 Client Sample ID:
 SSP/AP MW-1
 Matrix:
 Aqueous

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesun	Onits	Quanners			Metriod	Analysis bate / by
MAJOR IONS							
Calcium	685	mg/L		1		E200.7	12/27/16 13:40 / jh
Magnesium	149	mg/L		1		E200.7	12/27/16 13:40 / jh
Potassium	55	mg/L		1		E200.7	12/27/16 13:40 / jh
Sodium	1290	mg/L	D	4		E200.7	12/27/16 13:40 / jh
PHYSICAL PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	12/22/16 16:14 / pjw
Solids, Total Dissolved TDS @ 180 C	6470	mg/L	D	100		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	1500	mg/L	D	6		E300.0	12/23/16 14:37 / jpv
Sulfate		mg/L	D	20		E300.0	12/23/16 14:37 / jpv
Fluoride		mg/L	D	0.1		A4500-F C	12/27/16 16:24 / cjm
METALS TOTAL DECOVERABLE		Ü					•
METALS, TOTAL RECOVERABLE	ND	no a/I		0.05		E200.7	10/00/16 10:01 / ib
Antimony Arsenic		mg/L		0.03		E200.7 E200.8	12/28/16 12:21 / jh 12/23/16 15:39 / rlh
Barium		mg/L mg/L		0.01		E200.8	12/23/16 15:39 / rlh
Beryllium	0.002			0.01		E200.8	12/23/16 15:39 / rlh
Boron		mg/L		0.001		E200.7	12/23/16 13:39 / IIII 12/27/16 13:40 / jh
Cadmium		mg/L		0.03		E200.7 E200.8	12/23/16 15:39 / rlh
Chromium		mg/L		0.01		E200.8	12/23/16 15:39 / rlh
Cobalt		mg/L		0.01		E200.8	12/23/16 15:39 / rlh
Lead		mg/L		0.01		E200.8	12/23/16 15:39 / rlh
Lithium		mg/L	D	0.02		E200.7	12/27/16 13:40 / jh
Mercury		mg/L	D	0.001		E245.1	12/23/16 12:39 / ser
Molybdenum		mg/L		0.05		E200.7	12/28/16 12:21 / jh
Selenium		mg/L		0.01		E200.8	12/23/16 15:39 / rlh
Thallium		mg/L		0.01		E200.8	12/23/16 15:39 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.01	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC		pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228		pCi/L	U			RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)		pCi/L	J			RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC		pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228		pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L	J			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC		pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
		-					

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA-6706-15-0060 Collection Date: 12/21/16 12:16 Lab ID: B16121644-004 DateReceived: 12/22/16 Client Sample ID: AP-MW1D Matrix: Aqueous

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesuit	Units	Qualifiers		QUL	Wethou	Allalysis Date / By
MAJOR IONS							
Calcium	77	mg/L		1		E200.7	12/28/16 12:47 / jh
Magnesium		mg/L		1		E200.7	12/28/16 12:47 / jh
Potassium	11	mg/L		1		E200.7	12/28/16 12:47 / jh
Sodium	321	mg/L	D	2		E200.7	12/28/16 12:47 / jh
PHYSICAL PROPERTIES							
pH	6.1	s.u.	Н	0.1		A4500-H B	12/22/16 16:16 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	20		A2540 C	12/22/16 16:14 / jef
INORGANICS		-					·
Chloride	220	mg/L		1		E300.0	12/23/16 14:51 / jpv
Sulfate		mg/L	D	4		E300.0	12/23/16 14:51 / jpv
Fluoride		mg/L	D	0.1		A4500-F C	12/23/16 14:51 / jpv 12/27/16 16:27 / cjm
	0.0	IIIg/L		0.1		A4300-F C	12/21/10 10.21 / Gjili
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 15:29 / jpv
Arsenic	ND	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Barium	0.01	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Beryllium	ND	mg/L		0.001		E200.8	12/23/16 15:42 / rlh
Boron	4.80	mg/L		0.05		E200.7	12/28/16 12:47 / jh
Cadmium	ND	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Chromium		mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Cobalt	ND	mg/L		0.02		E200.8	12/23/16 15:42 / rlh
Lead	ND	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Lithium		mg/L		0.01		E200.7	12/28/16 12:47 / jh
Mercury	ND	mg/L		0.001		E245.1	12/23/16 12:41 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 12:47 / jh
Selenium	ND	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 15:42 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.32	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	2.2	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	2.5	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 01/12/17 Project: TMPA-6706-15-0060 Collection Date: 12/20/16 16:10 DateReceived: 12/22/16 Lab ID: B16121644-005 Client Sample ID: SSP-MW2 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	925	mg/L		1		E200.7	12/27/16 13:43 / jh
Magnesium		mg/L		1		E200.7	12/27/16 13:43 / jh
Potassium		mg/L		1		E200.7	12/27/16 13:43 / jh
Sodium		mg/L	D	4		E200.7	12/27/16 13:43 / jh
PHYSICAL PROPERTIES							
Hq	5.5	s.u.	Н	0.1		A4500-H B	12/22/16 16:19 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	2550	mg/L	D	6		E300.0	12/23/16 15:05 / jpv
Sulfate		mg/L	D	20		E300.0	12/23/16 15:05 / jpv
Fluoride		mg/L	_	0.1		A4500-F C	12/27/16 16:43 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 15:32 / jpv
Arsenic		mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Barium		mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Beryllium	0.025	Ū		0.001		E200.8	12/23/16 15:46 / rlh
Boron		mg/L		0.05		E200.7	12/27/16 13:43 / jh
Cadmium		mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Chromium		mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Cobalt		mg/L		0.02		E200.8	12/23/16 15:46 / rlh
Lead	ND	mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Lithium	1.03	mg/L	D	0.02		E200.7	12/27/16 13:43 / jh
Mercury	ND	mg/L		0.001		E245.1	12/23/16 12:42 / ser
Molybdenum	ND	mg/L		0.05		E200.8	12/28/16 15:32 / jpv
Selenium	ND	mg/L		0.01		E200.8	12/23/16 15:46 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 15:46 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.71	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	0.98	pCi/L	U			RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	1.7	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.0	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA-6706-15-0060 Collection Date: 12/20/16 17:20 Lab ID: B16121644-006 DateReceived: 12/22/16 Client Sample ID: SSP-MW3 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	702	mg/L		1		E200.7	10/00/16 10:51 / ib
		mg/L		1		E200.7 E200.7	12/28/16 12:51 / jh
Magnesium Potassium		mg/L		1		E200.7 E200.7	12/28/16 12:51 / jh 12/28/16 12:51 / jh
Sodium		mg/L	D	4		E200.7	12/28/16 12:51 / jh
Sodium	1100	IIIg/L	D	4		E200.7	12/20/10 12.51/ jii
PHYSICAL PROPERTIES							
рН	4.5	s.u.	Н	0.1		A4500-H B	12/22/16 16:22 / pjw
Solids, Total Dissolved TDS @ 180 C	5780	mg/L	D	100		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	1700	mg/L	D	6		E300.0	12/23/16 15:19 / jpv
Sulfate	2480	mg/L	D	20		E300.0	12/23/16 15:19 / jpv
Fluoride	0.8	mg/L		0.1		A4500-F C	12/27/16 16:50 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 15:35 / jpv
Arsenic		mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Barium		mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Beryllium	0.121	mg/L		0.001		E200.8	12/23/16 15:49 / rlh
Boron	2.86	mg/L		0.05		E200.7	12/28/16 12:51 / jh
Cadmium	0.06	mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Chromium	0.01	mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Cobalt	0.59	mg/L		0.02		E200.8	12/23/16 15:49 / rlh
Lead	0.03	mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Lithium	0.73	mg/L	D	0.02		E200.7	12/28/16 12:51 / jh
Mercury	ND	mg/L		0.001		E245.1	12/23/16 12:44 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 12:51 / jh
Selenium	ND	mg/L		0.01		E200.8	12/23/16 15:49 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 15:49 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	9.3	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	1.8	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228		pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	5.3	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	37.0	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	5.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060

 Lab ID:
 B16121644-007

 Client Sample ID:
 AP-MW4

Report Date: 01/12/17
Collection Date: 12/21/16 10:42
DateReceived: 12/22/16
Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	551	mg/L		1		E200.7	12/27/16 13:47 / jh
Magnesium		mg/L		1		E200.7	12/27/16 13:47 / jh
Potassium		mg/L		1		E200.7	12/27/16 13:47 / jh
Sodium		mg/L	D	2		E200.7	12/27/16 13:47 / jh
		3					, ,
PHYSICAL PROPERTIES	5 0			0.1		4.4E00 LLD	10/00/16 16:04 / piv
pH Solida Total Dissolved TDS @ 190 C		s.u. mg/L	H D	40		A4500-H B A2540 C	12/22/16 16:24 / pjw
Solids, Total Dissolved TDS @ 180 C	4120	mg/L	D	40		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	507	mg/L	D	3		E300.0	12/23/16 15:33 / jpv
Sulfate	2250	mg/L	D	9		E300.0	12/23/16 15:33 / jpv
Fluoride	ND	mg/L		0.1		A4500-F C	12/27/16 16:57 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 15:39 / jpv
Arsenic		mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Barium		mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Beryllium	ND	mg/L		0.001		E200.8	12/23/16 16:02 / rlh
Boron	2.11	mg/L		0.05		E200.7	12/27/16 13:47 / jh
Cadmium	ND	mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Chromium	ND	mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Cobalt	ND	mg/L		0.02		E200.8	12/23/16 16:02 / rlh
Lead	ND	mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Lithium	1.03	mg/L		0.01		E200.7	12/27/16 13:47 / jh
Mercury		mg/L		0.001		E245.1	12/23/16 12:49 / ser
Molybdenum	ND	mg/L		0.05		E200.8	12/28/16 15:39 / jpv
Selenium	ND	mg/L		0.01		E200.8	12/23/16 16:02 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 16:02 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	0.68	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	2.4	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	3.0	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.0	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Minimum detectable com

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Collection Date: 12/21/16 12:32 DateReceived: 12/22/16 Lab ID: B16121644-008 Client Sample ID: SFL-MW6 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL		Method	Analysis Date / By
MAJOR IONS							
Calcium	977	mg/L		1		E200.7	12/28/16 12:54 / jh
Magnesium		mg/L		1		E200.7	12/28/16 12:54 / jh
Potassium		mg/L	D	2		E200.7	12/28/16 12:54 / jh
Sodium		mg/L	D	7		E200.7	12/28/16 12:54 / jh
PHYSICAL PROPERTIES							
Η	4.1	s.u.	Н	0.1		A4500-H B	12/22/16 16:27 / pjw
Solids, Total Dissolved TDS @ 180 C	8640	mg/L	D	100		A2540 C	12/22/16 16:14 / jef
INORGANICS							
Chloride	3580	mg/L	D	10		E300.0	12/23/16 15:47 / jpv
Sulfate	2120	mg/L	D	40		E300.0	12/23/16 15:47 / jpv
Fluoride	8.0	mg/L		0.1		A4500-F C	12/27/16 17:14 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 15:42 / jpv
Arsenic	ND	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Barium	0.05	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Beryllium	0.047	mg/L		0.001		E200.8	12/23/16 16:05 / rlh
Boron	0.40	mg/L	D	0.07		E200.7	12/28/16 12:54 / jh
Cadmium	0.01	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Chromium	ND	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Cobalt	0.12	mg/L		0.02		E200.8	12/23/16 16:05 / rlh
Lead	ND	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Lithium	0.93	mg/L	D	0.04		E200.7	12/28/16 12:54 / jh
Mercury	ND	mg/L		0.001		E245.1	12/23/16 12:51 / ser
Molybdenum	ND	mg/L		0.05		E200.8	12/28/16 15:42 / jpv
Selenium	ND	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
Thallium	ND	mg/L		0.01		E200.8	12/23/16 16:05 / rlh
RADIONUCLIDES - TOTAL							
Radium 226	3.6	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.78	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	11	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	2.7	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	14.3	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	2.8	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Collection Date: 12/21/16 09:16 Lab ID: B16121644-009 DateReceived: 12/23/16 Client Sample ID: AP-MW-3 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	137	mg/L		1		E200.7	12/28/16 13:05 / jh
Magnesium		mg/L		1		E200.7	12/28/16 13:05 / jh
Potassium		mg/L		1		E200.7	12/28/16 13:05 / jh
Sodium		mg/L		1		E200.7	12/28/16 13:05 / jh
PHYSICAL PROPERTIES							
рН	5.5	s.u.	Н	0.1		A4500-H B	12/23/16 11:38 / pjw
Solids, Total Dissolved TDS @ 180 C	1400	mg/L	D	20		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	141	mg/L		1		E300.0	12/27/16 18:03 / jpv
Sulfate	729	mg/L	D	4		E300.0	12/27/16 18:03 / jpv
Fluoride	0.1	mg/L		0.1		A4500-F C	12/27/16 17:17 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	12/28/16 13:05 / jh
Arsenic	ND	mg/L		0.01		E200.8	12/28/16 16:15 / jpv
Barium	0.03	mg/L		0.01		E200.7	12/28/16 13:05 / jh
Beryllium	0.003	mg/L		0.001		E200.8	12/29/16 16:25 / jpv
Boron	3.88	mg/L		0.05		E200.7	12/28/16 13:05 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 13:05 / jh
Chromium	ND	mg/L		0.01		E200.7	12/28/16 13:05 / jh
Cobalt	0.05	mg/L		0.02		E200.8	12/28/16 16:15 / jpv
Lead	ND	mg/L		0.01		E200.8	12/28/16 16:15 / jpv
Lithium	0.07	mg/L		0.01		E200.7	12/28/16 13:05 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 16:47 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 13:05 / jh
Selenium		mg/L		0.01		E200.8	12/28/16 16:15 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 16:15 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.77	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.22	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	2.1	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	2.9	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Matrix: Aqueous

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Collection Date: 12/21/16 13:15 DateReceived: 12/23/16 Lab ID: B16121644-011 Client Sample ID: EQBK-MPS-122116

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
							· · · · · · · · · · · · · · · · · · ·
MAJOR IONS							
Calcium		mg/L		1		E200.7	12/28/16 13:57 / jh
Magnesium		mg/L		1		E200.7	12/28/16 13:57 / jh
Potassium		mg/L		1		E200.7	12/28/16 13:57 / jh
Sodium	ND	mg/L		1		E200.7	12/28/16 13:57 / jh
PHYSICAL PROPERTIES							
рН	5.5	s.u.	Н	0.1		A4500-H B	12/23/16 11:46 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	ND	mg/L		1		E300.0	12/27/16 18:32 / jpv
Sulfate		mg/L		1		E300.0	12/27/16 18:32 / jpv
Fluoride		mg/L		0.1		A4500-F C	12/27/16 17:38 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	12/28/16 13:57 / jh
Arsenic		mg/L		0.01		E200.8	12/28/16 16:38 / jpv
Barium		mg/L		0.01		E200.7	12/28/16 13:57 / jh
Beryllium		mg/L		0.001		E200.7	12/28/16 13:57 / jh
Boron		mg/L		0.05		E200.7	12/28/16 13:57 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 13:57 / jh
Chromium	ND	mg/L		0.01		E200.7	12/28/16 13:57 / jh
Cobalt	ND	mg/L		0.02		E200.7	12/28/16 13:57 / jh
Lead	ND	mg/L		0.01		E200.8	12/28/16 16:38 / jpv
Lithium	ND	mg/L		0.01		E200.7	12/28/16 13:57 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 16:51 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 13:57 / jh
Selenium	ND	mg/L		0.01		E200.8	12/28/16 16:38 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 16:38 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.17	pCi/L	U			E903.0	01/11/17 14:24 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 226 MDC	0.27	pCi/L				E903.0	01/11/17 14:24 / eli-ca
Radium 228	0.51	pCi/L	U			RA-05	01/06/17 11:15 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 228 MDC	2.7	pCi/L				RA-05	01/06/17 11:15 / eli-ca
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.7	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Lab ID: B16121644-012 Client Sample ID: DUP 2

Report Date: 01/12/17 Collection Date: 12/21/16 DateReceived: 12/23/16 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	133	mg/L		1		E200.7	12/28/16 14:01 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:01 / jh
Potassium		mg/L		1		E200.7	12/28/16 14:01 / jh
Sodium		mg/L		1		E200.7	12/28/16 14:01 / jh
PHYSICAL PROPERTIES							
рН	5.5	s.u.	Н	0.1		A4500-H B	12/23/16 11:48 / pjw
Solids, Total Dissolved TDS @ 180 C	1390	mg/L	D	20		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	141	mg/L		1		E300.0	12/27/16 18:46 / jpv
Sulfate		mg/L	D	4		E300.0	12/27/16 18:46 / jpv
Fluoride	0.1	mg/L		0.1		A4500-F C	12/27/16 17:42 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	12/28/16 14:01 / jh
Arsenic	ND	mg/L		0.01		E200.8	12/28/16 16:52 / jpv
Barium	0.02	mg/L		0.01		E200.7	12/28/16 14:01 / jh
Beryllium	0.003	mg/L		0.001		E200.8	12/29/16 16:31 / jpv
Boron	3.53	mg/L		0.05		E200.7	12/28/16 14:01 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 14:01 / jh
Chromium	ND	mg/L		0.01		E200.7	12/28/16 14:01 / jh
Cobalt	0.05	mg/L		0.02		E200.8	12/28/16 16:52 / jpv
Lead	ND	mg/L		0.01		E200.8	12/28/16 16:52 / jpv
Lithium	0.07	mg/L		0.01		E200.7	12/28/16 14:01 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 16:53 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 14:01 / jh
Selenium	ND	mg/L		0.01		E200.8	12/28/16 16:52 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 16:52 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.91	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.23	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	0.44	pCi/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.6	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	1.4	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060

 Lab ID:
 B16121644-013

 Client Sample ID:
 SSP-MW4

Report Date: 01/12/17
Collection Date: 12/20/16 16:52
DateReceived: 12/23/16
Matrix: Aqueous

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
riidiyooo	Nesuit	Oilits	Qualificis			Method	Analysis bate / by
MAJOR IONS							
Calcium	413	mg/L		1		E200.7	12/28/16 14:04 / jh
Magnesium	84	mg/L		1		E200.7	12/28/16 14:04 / jh
Potassium	56	mg/L		1		E200.7	12/28/16 14:04 / jh
Sodium	741	mg/L	D	4		E200.7	12/28/16 14:04 / jh
PHYSICAL PROPERTIES							
pH	6.5	s.u.	Н	0.1		A4500-H B	12/23/16 11:51 / pjw
Solids, Total Dissolved TDS @ 180 C	3850	mg/L	D	40		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	1170	mg/L	D	6		E300.0	12/27/16 19:01 / jpv
Sulfate		mg/L	D	20		E300.0	12/27/16 19:01 / jpv
Fluoride		mg/L	_	0.1		A4500-F C	12/27/16 17:44 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:18 / jpv
Arsenic		mg/L		0.03		E200.8	12/28/16 17:18 / jpv
Barium		mg/L		0.01		E200.7	12/28/16 14:04 / jh
Beryllium	0.003	•		0.001		E200.8	12/28/16 17:18 / jpv
Boron		mg/L		0.05		E200.7	12/28/16 14:04 / jh
Cadmium		mg/L		0.01		E200.7	12/28/16 14:04 / jh
Chromium		mg/L		0.01		E200.8	12/28/16 17:18 / jpv
Cobalt		mg/L		0.02		E200.7	12/28/16 14:04 / jh
Lead		mg/L		0.01		E200.8	12/28/16 17:18 / jpv
Lithium		mg/L	D	0.02		E200.7	12/28/16 14:04 / jh
Mercury		mg/L		0.001		E245.1	12/28/16 16:55 / ser
Molybdenum		mg/L		0.05		E200.7	12/28/16 14:04 / jh
Selenium		mg/L		0.01		E200.8	12/28/16 17:18 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:18 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.7	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.42	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC		pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228		pCi/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC		pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.7	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit.

Definitions:

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Lab ID: B16121644-014 Client Sample ID: EQBK-12-20-16/SCM

Report Date: 01/12/17 Collection Date: 12/20/16 18:00 DateReceived: 12/23/16 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	12/28/16 14:07 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:07 / jh
Potassium		mg/L		1		E200.7	12/28/16 14:07 / jh
Sodium		mg/L		1		E200.7	12/28/16 14:07 / jh
		J.					
PHYSICAL PROPERTIES	F 0			0.4		4.4500 LLD	10/00/10 11:50 /
pH	5.8		Н	0.1 10		A4500-H B	12/23/16 11:53 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	ND	mg/L		1		E300.0	12/27/16 19:15 / jpv
Sulfate	ND	mg/L		1		E300.0	12/27/16 19:15 / jpv
Fluoride	ND	mg/L		0.1		A4500-F C	12/27/16 17:52 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	12/28/16 14:07 / jh
Arsenic		mg/L		0.01		E200.8	12/28/16 17:21 / jpv
Barium	ND	mg/L		0.01		E200.7	12/28/16 14:07 / jh
Beryllium	ND	mg/L		0.001		E200.7	12/28/16 14:07 / jh
Boron	ND	mg/L		0.05		E200.7	12/28/16 14:07 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 14:07 / jh
Chromium	ND	mg/L		0.01		E200.7	12/28/16 14:07 / jh
Cobalt	ND	mg/L		0.02		E200.7	12/28/16 14:07 / jh
Lead	ND	mg/L		0.01		E200.8	12/28/16 17:21 / jpv
Lithium	ND	mg/L		0.01		E200.7	12/28/16 14:07 / jh
Mercury		mg/L		0.001		E245.1	12/28/16 16:57 / ser
Molybdenum		mg/L		0.05		E200.7	12/28/16 14:07 / jh
Selenium	ND	mg/L		0.01		E200.8	12/28/16 17:21 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:21 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.26	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	-0.9	pCi/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.8	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	3.1	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	-0.8	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.8	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	3.1	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA-6706-15-0060 Lab ID: B16121644-015 Client Sample ID: AP-MW5

Report Date: 01/12/17 Collection Date: 12/21/16 09:06 DateReceived: 12/23/16 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	575	mg/L		1		E200.7	12/28/16 14:11 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:11 / jh
Potassium	47	mg/L		1		E200.7	12/28/16 14:11 / jh
Sodium	765	mg/L	D	4		E200.7	12/28/16 14:11 / jh
PHYSICAL PROPERTIES							
pH	3.6	s.u.	Н	0.1		A4500-H B	12/23/16 11:56 / pjw
Solids, Total Dissolved TDS @ 180 C	4940	mg/L	D	40		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	480	mg/L	D	6		E300.0	12/27/16 19:30 / jpv
Sulfate	2960	mg/L	D	20		E300.0	12/27/16 19:30 / jpv
Fluoride	1.2	mg/L		0.1		A4500-F C	12/30/16 15:33 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:25 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	12/28/16 17:25 / jpv
Barium	ND	mg/L		0.01		E200.7	12/28/16 14:11 / jh
Beryllium	0.088	mg/L		0.001		E200.8	12/28/16 17:25 / jpv
Boron	3.66	mg/L		0.05		E200.7	12/28/16 14:11 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 14:11 / jh
Chromium		mg/L		0.01		E200.8	12/28/16 17:25 / jpv
Cobalt	0.20	mg/L		0.02		E200.8	12/28/16 17:25 / jpv
Lead	ND	mg/L		0.01		E200.8	12/28/16 17:25 / jpv
Lithium	0.66	mg/L	D	0.02		E200.7	12/28/16 14:11 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 16:59 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 14:11 / jh
Selenium	0.01	mg/L		0.01		E200.8	12/28/16 17:25 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:25 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.21	pCi/L	U			E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.27	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	4.3	pCi/L				RA-05	01/06/17 11:14 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	01/06/17 11:14 / eli-ca
Radium 228 MDC	2.7	pCi/L				RA-05	01/06/17 11:14 / eli-ca
Radium 226 + Radium 228	4.5	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.7	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060

 Lab ID:
 B16121644-016

 Client Sample ID:
 DUP-1

Collection Date: 12/21/16
DateReceived: 12/23/16
Matrix: Aqueous

Report Date: 01/12/17

Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca						MCL/		
Calcium 523 mg/L 1 E200.7 12/28/16 14:15 / jh Magnesium 121 mg/L 1 E200.7 12/28/16 14:15 / jh Potassium 121 mg/L 1 E200.7 12/28/16 14:15 / jh Sodium 711 mg/L 1 E200.7 12/28/16 14:15 / jh Sodium 711 mg/L D 4 E200.7 12/28/16 14:15 / jh Sodium 711 mg/L D 4 E200.7 12/28/16 14:15 / jh PHYSICAL PROPERTIES PH 3.6 s.u. H 0.1 A4500-H B 12/23/16 11.58 / pjw Solids, Total Dissolved TDS @ 180 C 4750 mg/L D 40 A2540 C 12/23/16 10:46 / jef INORGANICS INORGANICS Chloride 466 mg/L D 6 E300.0 12/27/16 19:44 / jpv Sulfate 2860 mg/L D 20 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L 0.1 A4500-F C 12/30/16 19:44 / jpv Fluoride 1.2 mg/L 0.1 A4500-F C 12/30/16 19:48 / jpv Braining METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.7 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.7 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.001 E200.7 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.001 E200.7 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.001 E200.7 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.001 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Robolatium ND mg	Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
Magnesium 121 mg/L 1 E200.7 12/28/16 14:15 / jh Potassium 44 mg/L 1 E200.7 12/28/16 14:15 / jh Sodium 711 mg/L D 4 E200.7 12/28/16 14:15 / jh PHYSICAL PROPERTIES pH 3.6 s.u. H 0.1 A4500-H B 12/23/16 11:58 / pjw Solids, Total Dissolved TDS @ 180 C 4750 mg/L D 40 A2540 C 12/23/16 10:46 / jef INORGANICS INORGANICS Chloride 466 mg/L D 6 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D. 20 E300.0 12/27/16 19:44 / jpv METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 12/28/16 17:28 / jpv Arsenic 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Beryllium 0.084 mg/L	MAJOR IONS							
Magnesium 121 mg/L 1 E200.7 12/28/16 14:15 / jh Potassium 44 mg/L 1 E200.7 12/28/16 14:15 / jh Sodium 711 mg/L D 4 E200.7 12/28/16 14:15 / jh PHYSICAL PROPERTIES pH 3.6 s.u. H 0.1 A4500-H B 12/23/16 11:58 / pjw Solids, Total Dissolved TDS @ 180 C 4750 mg/L D 40 A2540 C 12/23/16 10:46 / jef INORGANICS INORGANICS Chloride 466 mg/L D 6 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D. 20 E300.0 12/27/16 19:44 / jpv METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 12/28/16 17:28 / jpv Arsenic 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Beryllium 0.084 mg/L	Calcium	523	mg/L		1		E200.7	12/28/16 14:15 / jh
Sodilum	Magnesium				1		E200.7	12/28/16 14:15 / jh
PHYSICAL PROPERTIES pH	Potassium	44	mg/L		1		E200.7	12/28/16 14:15 / jh
pH	Sodium	711	mg/L	D	4		E200.7	12/28/16 14:15 / jh
Solids, Total Dissolved TDS @ 180 C	PHYSICAL PROPERTIES							
NORGANICS	pH	3.6	s.u.	Н	0.1		A4500-H B	12/23/16 11:58 / pjw
Chloride 466 mg/L D 6 E300.0 12/27/16 19:44 / jpv Sulfate 2860 mg/L D 20 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D 20 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D 20 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D 20 E300.0 12/27/16 19:44 / jpv D 20 E300.0 12/27/16 19:44 / jpv Fluoride 1.2 mg/L D 0.1 A4500-F C 12/30/16 15:58 / cjm METALS, TOTAL RECOVERABLE Antimony ND mg/L D 0.05 E200.8 12/28/16 17:28 / jpv Arsenic 0.01 mg/L D 0.05 E200.8 12/28/16 17:28 / jpv D 20.01 E200.8 12/28/16 17:28 / jpv D 20.01 E200.8 12/28/16 14:15 / jh D 20.01 E200.7 12/28/16 14:15 / jh D 20.01 E200.7 12/28/16 14:15 / jh D 20.01 E200.8 12/28/16 14:15 / jh D 20.01 E200.8 12/28/16 14:15 / jh D 20.01 E200.8 12/28/16 17:28 / jpv D 20.01 E200.8 12/28/16 14:15 / jh D 20.02 E200.7 12/28/16 14:15 / jh D 20.01 E200.8 12/28/16 17:28 / jpv D 20.01	Solids, Total Dissolved TDS @ 180 C	4750	mg/L	D	40		A2540 C	12/23/16 10:46 / jef
Sulfate 2860 mg/L D 20 mg/L E300.0 mg/L 12/27/16 19:44 / jpv Fluoride 1.2 mg/L 0.1 mg/L 20 mg/L 20 mg/L 20 mg/L 21/28/16 17:28 / jpv METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 12/28/16 17:28 / jpv Arsenic 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.8 12/28/16 14:15 / jh Beryllium 0.084 mg/L 0.001 E200.7 12/28/16 14:15 / jh Boron 3.54 mg/L 0.005 E200.7 12/28/16 14:15 / jh Cadmium 0.01 mg/L 0.01 E200.8 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.7 12/28/16 14:15 / jh Choalt 0.19 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Molydenu	INORGANICS							
METALS, TOTAL RECOVERABLE	Chloride	466	mg/L	D	6		E300.0	12/27/16 19:44 / jpv
METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.05 E200.8 12/28/16 17:28 / jpv Arsenic 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Beryllium 0.084 mg/L 0.001 E200.7 12/28/16 14:15 / jh Beryllium 0.084 mg/L 0.005 E200.7 12/28/16 14:15 / jh Cadmium 0.01 mg/L 0.01 E200.7 12/28/16 14:15 / jh Cadmium ND mg/L 0.01 E200.7 12/28/16 14:15 / jh Chalt 0.19 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Mercury ND mg/L 0.01 E200.7 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/1	Sulfate	2860	mg/L	D	20		E300.0	12/27/16 19:44 / jpv
Antimony	Fluoride	1.2	mg/L		0.1		A4500-F C	12/30/16 15:58 / cjm
Arsenic 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Barium ND mg/L 0.01 E200.7 12/28/16 17:28 / jpv Barium ND mg/L 0.001 E200.7 12/28/16 14:15 / jh Beryllium 0.084 mg/L 0.001 E200.8 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.05 E200.7 12/28/16 17:28 / jpv Boron 0.3.54 mg/L 0.01 E200.7 12/28/16 14:15 / jh Cadmium 0.01 mg/L 0.01 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum 0.01 mg/L 0.05 E200.7 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 mCC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 mCC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	METALS, TOTAL RECOVERABLE							
Barium ND mg/L 0.01 E200.7 12/28/16 14:15 / jh Beryllium 0.084 mg/L 0.001 E200.8 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.05 E200.7 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.05 E200.7 12/28/16 17:28 / jpv Cadmium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cohromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:28 / jpv Lithium ND mg/L 0.001 E245.1 12/28/16 17:28 / jpv Belenium ND mg/L 0.001 E200.8 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 0.19 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 HZ Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:28 / jpv
Beryllium 0.084 mg/L 0.001 E200.8 12/28/16 17:28 / jpv Boron 3.54 mg/L 0.05 E200.7 12/28/16 14:15 / jh Cadmium 0.01 mg/L 0.01 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 17:01 / ser Molybdenum ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226	Arsenic	0.01	mg/L		0.01		E200.8	12/28/16 17:28 / jpv
Boron 3.54 mg/L 0.05 E200.7 12/28/16 14:15 / jh Cadmium 0.01 mg/L 0.01 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 17:28 / jpv Lithium ND mg/L 0.001 E245.1 12/28/16 17:27 / jp Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 MDC 0.19 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	Barium	ND	mg/L		0.01		E200.7	12/28/16 14:15 / jh
Cadmium 0.01 mg/L 0.01 E200.7 12/28/16 14:15 / jh Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 17:28 / jpv Molybdenum ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.19 </td <td>Beryllium</td> <td>0.084</td> <td>mg/L</td> <td></td> <td>0.001</td> <td></td> <td>E200.8</td> <td>12/28/16 17:28 / jpv</td>	Beryllium	0.084	mg/L		0.001		E200.8	12/28/16 17:28 / jpv
Chromium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226	Boron	3.54	mg/L		0.05		E200.7	12/28/16 14:15 / jh
Cobalt 0.19 mg/L 0.02 E200.8 12/28/16 17:28 / jpv Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 TOTAL Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	Cadmium	0.01	mg/L		0.01		E200.7	12/28/16 14:15 / jh
Lead ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 precision (±) 1.4 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 Precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L U A75	Chromium		-		0.01		E200.8	12/28/16 17:28 / jpv
Lithium 0.63 mg/L D 0.02 E200.7 12/28/16 14:15 / jh Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.05 E200.7 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 precision (±) 1.4 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 228 Precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	Cobalt	0.19	mg/L		0.02		E200.8	12/28/16 17:28 / jpv
Mercury ND mg/L 0.001 E245.1 12/28/16 17:01 / ser Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 precision (±) 1.4 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Lead	ND	mg/L		0.01		E200.8	12/28/16 17:28 / jpv
Molybdenum ND mg/L 0.05 E200.7 12/28/16 14:15 / jh Selenium 0.01 mg/L 0.01 E200.8 12/28/16 17:28 / jpv Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca	Lithium	0.63	mg/L	D	0.02		E200.7	12/28/16 14:15 / jh
Selenium 0.01 mg/L 0.01 mg/L 0.01 mg/L E200.8 mg/L 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 mc -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 mc 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Mercury	ND	mg/L		0.001		E245.1	12/28/16 17:01 / ser
Thallium ND mg/L 0.01 E200.8 12/28/16 17:28 / jpv RADIONUCLIDES - TOTAL Radium 226	Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 14:15 / jh
RADIONUCLIDES - TOTAL Radium 226	Selenium	0.01	mg/L		0.01		E200.8	12/28/16 17:28 / jpv
Radium 226 1.6 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:28 / jpv
Radium 226 precision (±) 0.39 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	RADIONUCLIDES - TOTAL							
Radium 226 MDC 0.19 pCi/L E903.0 01/11/17 16:40 / eli-ca Radium 228 -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 226	1.6	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228 -0.01 pCi/L U RA-05 01/06/17 12:53 / eli-ca Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 226 precision (±)	0.39	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228 precision (±) 1.4 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 226 MDC	0.19	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228 MDC 2.3 pCi/L RA-05 01/06/17 12:53 / eli-ca Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 228	-0.01	pCi/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228 1.6 pCi/L U A7500-RA 01/12/17 12:49 / eli-ca Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 228 precision (±)	1.4	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228 precision (±) 1.4 pCi/L A7500-RA 01/12/17 12:49 / eli-ca	Radium 228 MDC	2.3	pCi/L				RA-05	01/06/17 12:53 / eli-ca
	Radium 226 + Radium 228	1.6	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
	Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
	Radium 226 + Radium 228 MDC	2.3	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA-6706-15-0060

 Lab ID:
 B16121644-017

 Client Sample ID:
 SFL-MW5

Report Date: 01/12/17
Collection Date: 12/21/16 15:39
DateReceived: 12/23/16
Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	944	mg/L		1		E200.7	12/28/16 14:18 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:18 / jh
Potassium	61	mg/L	D	2		E200.7	12/28/16 14:18 / jh
Sodium	1790	mg/L	D	7		E200.7	12/28/16 14:18 / jh
PHYSICAL PROPERTIES							
pH	4.8	s.u.	Н	0.1		A4500-H B	12/23/16 12:01 / pjw
Solids, Total Dissolved TDS @ 180 C	7910	mg/L	D	100		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	3160	mg/L	D	10		E300.0	12/27/16 20:27 / jpv
Sulfate	2170	mg/L	D	40		E300.0	12/27/16 20:27 / jpv
Fluoride	0.2	mg/L		0.1		A4500-F C	12/30/16 16:25 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:31 / jpv
Arsenic	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
Barium	0.03	mg/L		0.01		E200.7	12/28/16 14:18 / jh
Beryllium	0.010	mg/L		0.001		E200.8	12/28/16 17:31 / jpv
Boron	3.93	mg/L	D	0.07		E200.7	12/28/16 14:18 / jh
Cadmium	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
Chromium	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
Cobalt	0.06	mg/L		0.02		E200.8	12/28/16 17:31 / jpv
Lead	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
Lithium	0.99	mg/L	D	0.04		E200.7	12/28/16 14:18 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 17:07 / ser
Molybdenum	ND	mg/L		0.05		E200.8	12/28/16 17:31 / jpv
Selenium	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:31 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	4.1	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.87	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	4.6	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	8.7	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.8	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

DateReceived: 12/23/16

Collection Date: 12/22/16 09:45

Matrix: Aqueous

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA-6706-15-0060 Lab ID: B16121644-018 Client Sample ID: SFL-MW2

					MOI /		
Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	692	mg/L		1		E200.7	12/28/16 14:22 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:22 / jh
Potassium		mg/L		1		E200.7	12/28/16 14:22 / jh
Sodium	1600	mg/L	D	4		E200.7	12/28/16 14:22 / jh
PHYSICAL PROPERTIES							
рН	6.6	s.u.	Н	0.1		A4500-H B	12/23/16 12:04 / pjw
Solids, Total Dissolved TDS @ 180 C	6830	mg/L	D	100		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	2590	mg/L	D	6		E300.0	12/27/16 21:11 / jpv
Sulfate	1770	mg/L	D	20		E300.0	12/27/16 21:11 / jpv
Fluoride	0.3	mg/L		0.1		A4500-F C	12/30/16 16:45 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:35 / jpv
Arsenic	ND	mg/L		0.01		E200.8	12/28/16 17:35 / jpv
Barium	0.02	mg/L		0.01		E200.7	12/28/16 14:22 / jh
Beryllium	0.001	mg/L		0.001		E200.8	12/28/16 17:35 / jpv
Boron	0.54	mg/L		0.05		E200.7	12/28/16 14:22 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 14:22 / jh
Chromium		mg/L		0.01		E200.8	12/28/16 17:35 / jpv
Cobalt		mg/L		0.02		E200.7	12/28/16 14:22 / jh
Lead	ND	mg/L		0.01		E200.8	12/28/16 17:35 / jpv
Lithium	0.60	mg/L	D	0.02		E200.7	12/28/16 14:22 / jh
Mercury	ND	mg/L		0.001		E245.1	12/28/16 17:09 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 14:22 / jh
Selenium	ND	mg/L		0.01		E200.8	12/28/16 17:35 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:35 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	2.9	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.64	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	3.7	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	6.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.7	•				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Collection Date: 12/22/16 11:35 Lab ID: B16121644-019 DateReceived: 12/23/16 Client Sample ID: SFL-MW3 Matrix: Aqueous

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	725	mg/L		1		E200.7	12/28/16 14:25 / jh
Magnesium		mg/L		1		E200.7	12/28/16 14:25 / jh
Potassium		mg/L		1		E200.7	12/28/16 14:25 / jh
Sodium		mg/L	D	4		E200.7	12/28/16 14:25 / jh
Codium	913	IIIg/L	Ь	7		L200.7	12/20/10 14.23 / jii
PHYSICAL PROPERTIES							
рН	3.8	s.u.	Н	0.1		A4500-H B	12/23/16 12:06 / pjw
Solids, Total Dissolved TDS @ 180 C	5640	mg/L	D	100		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	1480	mg/L	D	6		E300.0	12/27/16 21:25 / jpv
Sulfate	2240	mg/L	D	20		E300.0	12/27/16 21:25 / jpv
Fluoride	0.6	mg/L		0.1		A4500-F C	12/30/16 16:55 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	12/28/16 17:38 / jpv
Arsenic		mg/L		0.01		E200.8	12/28/16 17:38 / jpv
Barium		mg/L		0.01		E200.7	12/28/16 14:25 / jh
Beryllium		mg/L		0.001		E200.8	12/28/16 17:38 / jpv
Boron		mg/L		0.05		E200.7	12/28/16 14:25 / jh
Cadmium	ND	mg/L		0.01		E200.7	12/28/16 14:25 / jh
Chromium		mg/L		0.01		E200.8	12/28/16 17:38 / jpv
Cobalt	0.10	mg/L		0.02		E200.7	12/28/16 14:25 / jh
Lead	0.03	mg/L		0.01		E200.8	12/28/16 17:38 / jpv
Lithium	0.47	mg/L	D	0.02		E200.7	12/28/16 14:25 / jh
Mercury	0.003	mg/L		0.001		E245.1	12/29/16 15:22 / ser
Molybdenum	ND	mg/L		0.05		E200.7	12/28/16 14:25 / jh
Selenium	ND	mg/L		0.01		E200.8	12/28/16 17:38 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:38 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	2.8	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.62	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	2.9	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	5.8	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA-6706-15-0060 Collection Date: 12/22/16 12:40 DateReceived: 12/23/16 Lab ID: B16121644-020 Client Sample ID: SFL-MW4 Matrix: Aqueous

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesuit	Onits	Qualificis		QUL	Metriod	Analysis Date / By
MAJOR IONS							
Calcium	858	mg/L		1		E200.7	12/28/16 14:36 / jh
Magnesium	132	mg/L		1		E200.7	12/28/16 14:36 / jh
Potassium	59	mg/L		1		E200.7	12/28/16 14:36 / jh
Sodium	1150	mg/L	D	4		E200.7	12/28/16 14:36 / jh
PHYSICAL PROPERTIES							
рН	6.6	s.u.	Н	0.1		A4500-H B	12/23/16 12:11 / pjw
Solids, Total Dissolved TDS @ 180 C	6000	mg/L	D	100		A2540 C	12/23/16 10:46 / jef
INORGANICS							
Chloride	1670	mg/L	D	6		E300.0	12/27/16 21:40 / jpv
Sulfate		mg/L	D	20		E300.0	12/27/16 21:40 / jpv
Fluoride		mg/L	Б	0.1		A4500-F C	12/30/16 16:58 / cjm
METALS, TOTAL RECOVERABLE	ND	,,		0.05		F000 0	10/00/10 17 11 /:
Antimony		mg/L		0.05		E200.8	12/28/16 17:41 / jpv
Arsenic		mg/L		0.01		E200.8	12/28/16 17:41 / jpv
Barium		mg/L		0.01		E200.7	12/28/16 14:36 / jh
Beryllium		mg/L		0.001		E200.8	12/28/16 17:41 / jpv
Boron		mg/L		0.05		E200.7	12/28/16 14:36 / jh
Cadmium		mg/L		0.01		E200.7	12/28/16 14:36 / jh
Chromium		mg/L		0.01		E200.8	12/28/16 17:41 / jpv
Cobalt		mg/L		0.02		E200.7	12/28/16 14:36 / jh
Lead		mg/L	_	0.01		E200.8	12/28/16 17:41 / jpv
Lithium		mg/L	D	0.02		E200.7	12/28/16 14:36 / jh
Mercury		mg/L		0.001		E245.1	12/28/16 17:13 / ser
Molybdenum		mg/L		0.05		E200.7	12/28/16 14:36 / jh
Selenium		mg/L		0.01		E200.8	12/28/16 17:41 / jpv
Thallium	ND	mg/L		0.01		E200.8	12/28/16 17:41 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.71	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	-0.4	pCi/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.5	pCi/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	0.4	pCi/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.5	pCi/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA-6706-15-0060 Project: Lab ID: B16121644-021 Client Sample ID: EQBK 12-22-16/SCM

Report Date: 01/12/17 Collection Date: 12/22/16 10:10 DateReceived: 12/23/16

Matrix: Aqueous

Analyses	Result U	Jnits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND m	na/L		1		E200.7	12/28/16 14:39 / jh
Magnesium	ND m	U		1		E200.7	12/28/16 14:39 / jh
Potassium	ND m	•		1		E200.7	12/28/16 14:39 / jh
Sodium	ND m	•		1		E200.7	12/28/16 14:39 / jh
PHYSICAL PROPERTIES							
рН	5.9 s	.u.	Н	0.1		A4500-H B	12/23/16 12:14 / pjw
Solids, Total Dissolved TDS @ 180 C	ND m	ng/L		10		A2540 C	12/23/16 11:46 / jef
INORGANICS							
Chloride	ND m	ng/L		1		E300.0	12/27/16 21:55 / jpv
Sulfate	ND m	ng/L		1		E300.0	12/27/16 21:55 / jpv
Fluoride	ND m	ng/L		0.1		A4500-F C	12/30/16 17:07 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND m	ng/L		0.05		E200.7	12/28/16 14:39 / jh
Arsenic	ND m	ng/L		0.01		E200.8	12/28/16 17:44 / jpv
Barium	ND m	ng/L		0.01		E200.7	12/28/16 14:39 / jh
Beryllium	ND m	ng/L		0.001		E200.7	12/28/16 14:39 / jh
Boron	ND m	ng/L		0.05		E200.7	12/28/16 14:39 / jh
Cadmium	ND m	ng/L		0.01		E200.7	12/28/16 14:39 / jh
Chromium	ND m	ng/L		0.01		E200.7	12/28/16 14:39 / jh
Cobalt	ND m	ng/L		0.02		E200.7	12/28/16 14:39 / jh
Lead	ND m	ng/L		0.01		E200.8	12/28/16 17:44 / jpv
Lithium	ND m	ng/L		0.01		E200.7	12/28/16 14:39 / jh
Mercury	ND m	ng/L		0.001		E245.1	12/28/16 17:15 / ser
Molybdenum	ND m	ng/L		0.05		E200.7	12/28/16 14:39 / jh
Selenium	ND m	ng/L		0.01		E200.8	12/28/16 17:44 / jpv
Thallium	ND m	ng/L		0.01		E200.8	12/28/16 17:44 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.12 p	Ci/L	U			E903.0	01/11/17 16:40 / eli-ca
Radium 226 precision (±)	0.14 p	Ci/L				E903.0	01/11/17 16:40 / eli-ca
Radium 226 MDC	0.21 p	Ci/L				E903.0	01/11/17 16:40 / eli-ca
Radium 228	-3 p	Ci/L	U			RA-05	01/06/17 12:53 / eli-ca
Radium 228 precision (±)	1.4 p	Ci/L				RA-05	01/06/17 12:53 / eli-ca
Radium 228 MDC	2.5 p	Ci/L				RA-05	01/06/17 12:53 / eli-ca
Radium 226 + Radium 228	-2 p	Ci/L	U			A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4 p	Ci/L				A7500-RA	01/12/17 12:49 / eli-ca
Radium 226 + Radium 228 MDC	2.5 p	Ci/L				A7500-RA	01/12/17 12:49 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte	Cour	nt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A25	540 C								Batch	n: 105401
Lab ID: B16	121540-007A DUP	Sample Duplica	ite			Run: BAL#	SD-15_161222A		12/22/	16 16:14
Solids, Total Dis	ssolved TDS @ 180 C	8790	mg/L	100				0.1	5	
Lab ID: B16	121644-005A DUP	Sample Duplica	ite			Run: BAL #	SD-15_161222A		12/22/	16 16:14
Solids, Total Dis	ssolved TDS @ 180 C	6900	mg/L	100				1.3	5	
Lab ID: LCS	S-105401	Laboratory Con	trol Sample			Run: BAL #	SD-15_161222A		12/22/	16 16:14
Solids, Total Dis	ssolved TDS @ 180 C	1000	mg/L	10	100	90	110			
Lab ID: MB-	-105401	Method Blank				Run: BAL #	SD-15_161222A		12/22/	16 16:14
Solids, Total Dis	ssolved TDS @ 180 C	ND	mg/L	5						
Method: A2	540 C								Batch	n: 105416
Lab ID: MB-	-105416	Method Blank				Run: BAL#	SD-15_161223B		12/23/	16 08:28
Solids, Total Dis	ssolved TDS @ 180 C	ND	mg/L	5						
Lab ID: LCS	S-105416	Laboratory Con	trol Sample			Run: BAL #	SD-15_161223B		12/23/	16 08:29
Solids, Total Dis	ssolved TDS @ 180 C	996	mg/L	10	99	90	110			
Lab ID: B16	121731-007A DUP	Sample Duplica	ite			Run: BAL#	SD-15_161223B		12/23/	16 08:29
Solids, Total Dis	ssolved TDS @ 180 C	1410	mg/L	10				8.0	5	
Lab ID: B16	121644-012A DUP	Sample Duplica	ite			Run: BAL #	SD-15_161223B		12/23/	16 10:46
Solids, Total Dis	ssolved TDS @ 180 C	1400	mg/L	20				0.4	5	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytica	al Run:	MAN-TECH	_161227A
Lab ID:	ICV	Initia	al Calibratio	on Verification Sta	ındard					12/27	/16 15:46
Fluoride			0.990	mg/L	0.10	99	90	110			
Method:	A4500-F C									Batch:	R272315
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_161227A		12/27	/16 15:40
Fluoride			ND	mg/L	0.03						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_161227A		12/27	/16 15:43
Fluoride			1.01	mg/L	0.10	101	90	110			
Lab ID:	B16121513-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH_161227A		12/27	/16 15:59
Fluoride			2.00	mg/L	0.10	102	80	120			
Lab ID:	B16121513-001AMS	D San	nple Matrix	Spike Duplicate			Run: MAN-	TECH_161227A		12/27	/16 16:01
Fluoride			1.99	mg/L	0.10	101	80	120	0.5	10	
Lab ID:	B16121644-007AMS	San	nple Matrix	Spike			Run: MAN-	TECH_161227A		12/27	/16 16:59
Fluoride			1.01	mg/L	0.10	94	80	120			
Lab ID:	B16121644-007AMS	D San	nple Matrix	Spike Duplicate			Run: MAN-	TECH_161227A		12/27	/16 17:02
Fluoride			1.02	mg/L	0.10	95	80	120	1.0	10	
Method:	A4500-F C							Analytica	al Run:	MAN-TECH	_161230A
Lab ID:	ICV	Initia	al Calibratio	on Verification Sta	ındard					12/30/	/16 15:22
Fluoride			1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C									Batch:	R272512
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_161230A		12/30/	/16 15:16
Fluoride			ND	mg/L	0.03						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_161230A		12/30/	/16 15:19
Fluoride			1.05	mg/L	0.10	105	90	110			
Lab ID:	B16121644-017AMS	San	nple Matrix	Spike			Run: MAN-	TECH_161230A		12/30/	/16 16:36
Fluoride			1.17	mg/L	0.10	98	80	120			
Lab ID:	B16121644-017AMS	D San	nple Matrix	Spike Duplicate			Run: MAN-	TECH_161230A		12/30	/16 16:43
Fluoride			1.09	mg/L	0.10	90	80	120	7.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD I	RPDLimit	Qual
Method:	A4500-H B							Analytical	Run: PH	SC _101-B_	161222A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	ition Standard					12/22/	16 09:52
pН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R272118
Lab ID:	B16121644-001ADUF	P San	nple Duplica	ate			Run: PHSC	_101-B_161222	Α	12/22/	16 16:08
pН			6.04	s.u.	0.10				0.7	3	
Lab ID:	B16121645-003ADUF	P San	nple Duplica	ate			Run: PHSC	_101-B_161222	Α	12/22/	16 16:45
pН			7.49	s.u.	0.10				0.1	3	
Method:	A4500-H B							Analytical	Run: PH	SC _101-B_	161223A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	tion Standard					12/23/	16 08:37
pН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R272190
Lab ID:	B16121644-009ADUF	P San	nple Duplica	ate			Run: PHSC	_101-B_161223	Α	12/23/	16 11:40
pН			5.53	s.u.	0.10				0.0	3	
Lab ID:	B16121644-019ADUF	9 San	nple Duplica	ate			Run: PHSC	_101-B_161223	A	12/23/	16 12:09
pН			3.84	s.u.	0.10				0.0	3	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Rui	n: ICP203-B	_161227 <i>F</i>
Lab ID:	ICV	6 Co	ntinuing Cal	ibration Verifi	cation Standa	rd				12/27	/16 11:06
Boron			2.46	mg/L	0.10	98	95	105			
Calcium			25.1	mg/L	1.0	101	95	105			
Lithium			1.26	mg/L	0.10	101	95	105			
Magnesiur	m		25.1	mg/L	1.0	100	95	105			
Potassium	า		25.0	mg/L	1.0	100	95	105			
Sodium			25.0	mg/L	1.0	100	95	105			
Method:	E200.7									Batc	h: 105395
Lab ID:	MB-105395	6 Me	thod Blank				Run: ICP20	3-B_161227A		12/27	/16 12:54
Boron			ND	mg/L	0.003						
Calcium			0.08	mg/L	0.03						
Lithium			0.007	mg/L	0.002						
Magnesiu	m		ND	mg/L	0.04						
Potassium	า		ND	mg/L	0.08						
Sodium			ND	mg/L	0.4						
Lab ID:	LCS-105395	6 La	boratory Cor	ntrol Sample			Run: ICP20	3-B_161227A		12/27	/16 12:58
Boron			0.516	mg/L	0.10	103	85	115			
Calcium			27.7	mg/L	1.0	110	85	115			
Lithium			0.556	mg/L	0.10	110	85	115			
Magnesiur	m		27.8	mg/L	1.0	111	85	115			
Potassium			27.4	mg/L	1.0	110	85	115			
Sodium			27.7	mg/L	1.0	111	85	115			
Lab ID:	B16121242-002AMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_161227A		12/27	/16 13:12
Boron			1.18	mg/L	0.050	103	70	130			
Calcium			253	mg/L	1.0		70	130			Α
Lithium			1.11	mg/L	0.10	103	70	130			
Magnesiu	m		122	mg/L	1.0	113	70	130			
Potassium	า		61.3	mg/L	1.0	105	70	130			
Sodium			131	mg/L	1.8	120	70	130			
Lab ID:	B16121242-002AMSE) 6 Sa	mple Matrix	Spike Duplica	ate		Run: ICP20	3-B_161227A		12/27	/16 13:22
Boron			1.16	mg/L	0.050	102	70	130	1.3	20	
Calcium			249	mg/L	1.0		70	130	1.6	20	Α
Lithium			1.11	mg/L	0.10	103	70	130	0.1	20	
Magnesiur	m		121	mg/L	1.0	111	70	130	8.0	20	
Potassium	า		61.1	mg/L	1.0	105	70	130	0.3	20	
Sodium			130	mg/L	1.8	117	70	130	1.3	20	
Lab ID:	B16121696-004BMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_161227A		12/27	/16 14:11
Boron			0.886	mg/L	0.050	103	70	130			
			136	mg/L	1.0		70	130			Α
Calcium											
Calcium Lithium			0.604	mg/L	0.10	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 105395
Lab ID:	B16121696-004BMS3	3 6 S	ample Matrix	Spike			Run: ICP20	3-B_161227A		12/27/	16 14:11
Potassium			39.9	mg/L	1.0	104	70	130			
Sodium			179	mg/L	1.0		70	130			Α
Lab ID:	B16121696-004BMSE	o 6 s	ample Matrix	Spike Dup	licate		Run: ICP20	3-B_161227A		12/27/	16 14:15
Boron			1.44	mg/L	0.050	107	70	130	47	20	R
Calcium			165	mg/L	1.0		70	130	19	20	Α
Lithium			1.15	mg/L	0.10	107	70	130	63	20	R
Magnesium	1		107	mg/L	1.0	111	70	130	31	20	R
Potassium			67.7	mg/L	1.0	108	70	130	52	20	R
Sodium			210	mg/L	1.0		70	130	15	20	Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

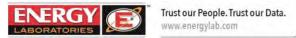
		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	lytical Run	: ICP203-B	_161228A
Lab ID:	ICV	13 Cor	ntinuing Cali	bration Verifi	cation Standa	rd				12/28	/16 09:49
Antimony			2.58	mg/L	0.050	103	95	105			
Barium			2.49	mg/L	0.10	99	95	105			
Beryllium			1.25	mg/L	0.010	100	95	105			
Boron			2.51	mg/L	0.10	100	95	105			
Cadmium			2.48	mg/L	0.010	99	95	105			
Calcium			25.1	mg/L	1.0	101	95	105			
Chromium			2.45	mg/L	0.050	98	95	105			
Cobalt			2.49	mg/L	0.020	99	95	105			
Lithium			1.26	mg/L	0.10	101	95	105			
Magnesiun	n		24.9	mg/L	1.0	99	95	105			
Molybdenu			2.52	mg/L	0.10	101	95	105			
Potassium			24.9	mg/L	1.0	99	95	105			
Sodium			25.0	mg/L	1.0	100	95	105			
Method:	E200.7									Batc	h: 105432
Lab ID:	MB-105432	8 Me	thod Blank				Run: ICP20	3-B_161228A		12/28	/16 12:10
Antimony			ND	mg/L	0.02						
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.03						
Lithium			0.007	mg/L	0.002						
Magnesiun	n		ND	mg/L	0.04						
Molybdenu			ND	mg/L	0.004						
Potassium			ND	mg/L	0.08						
Sodium			ND	mg/L	0.4						
Lab ID:	LCS-105432	8 Lab	oratory Cor	trol Sample			Run: ICP20	3-B_161228A		12/28	/16 12:14
Antimony			0.526	mg/L	0.10	105	85	_ 115			
Boron			0.468	mg/L	0.10	94	85	115			
Calcium			25.0	mg/L	1.0	100	85	115			
Lithium			0.506	mg/L	0.10	100	85	115			
Magnesiun	n		24.9	mg/L	1.0	100	85	115			
			0.489	mg/L	0.10	98	85	115			
-			24.8	mg/L	1.0	99	85	115			
Molybdenu Potassium	1										
Molybdenu	ı		24.9	mg/L	1.0	100	85	115			
Molybdenu Potassium	B16121644-003BMS3	3 8 Sar	24.9	mg/L	1.0	100				12/28/	/16 12:32
Molybdenu Potassium Sodium		3 8 Sar		mg/L Spike			Run: ICP20	3-B_161228A		12/28/	/16 12:32 S
Molybdenu Potassium Sodium Lab ID:		3 8 Sar	24.9 mple Matrix	mg/L Spike mg/L	0.022 0.050	100 65 97				12/28/	
Molybdenu Potassium Sodium Lab ID: Antimony		3 8 Sar	24.9 mple Matrix 0.325	mg/L Spike mg/L mg/L	0.022	65	Run: ICP20 70	3-B_161228A 130		12/28/	
Molybdenu Potassium Sodium Lab ID: Antimony Boron Calcium		3 8 Sar	24.9 mple Matrix 0.325 1.29	mg/L Spike mg/L mg/L mg/L	0.022 0.050	65	Run: ICP20 70 70	03-B_161228A 130 130		12/28/	S
Molybdenu Potassium Sodium Lab ID: Antimony Boron Calcium Lithium	B16121644-003BMS	3 8 Sar	24.9 mple Matrix 0.325 1.29 643	mg/L Spike mg/L mg/L mg/L mg/L	0.022 0.050 1.0 0.10	65 97	Run: ICP20 70 70 70 70	13-B_161228A 130 130 130 130		12/28/	S
Molybdenu Potassium Sodium Lab ID: Antimony Boron Calcium Lithium Magnesium	B16121644-003BMS 3	3 8 Sar	24.9 mple Matrix 0.325 1.29 643 1.61 168	mg/L Spike mg/L mg/L mg/L mg/L mg/L	0.022 0.050 1.0 0.10 1.0	65 97 92	Run: ICP20 70 70 70 70 70	13-B_161228A 130 130 130 130 130		12/28/	S A
Molybdenu Potassium Sodium Lab ID: Antimony Boron Calcium Lithium	B16121644-003BMS 3 m um	3 8 Sar	24.9 mple Matrix 0.325 1.29 643 1.61	mg/L Spike mg/L mg/L mg/L mg/L	0.022 0.050 1.0 0.10	65 97	Run: ICP20 70 70 70 70	13-B_161228A 130 130 130 130		12/28/	S A

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Bato	h: 105432
Lab ID:	B16121644-003BMSD	8 Sar	nple Matrix	Spike Duplicate			Run: ICP20)3-B_161228A		12/28	/16 12:36
Antimony			0.320	mg/L	0.022	64	70	130	1.4	20	S
Boron			1.37	mg/L	0.050	113	70	130	5.8	20	
Calcium			691	mg/L	1.0		70	130	7.2	20	Α
Lithium			1.73	mg/L	0.10	116	70	130	7.0	20	
Magnesium	1		179	mg/L	1.0		70	130	6.1	20	Α
Molybdenu	m		0.441	mg/L	0.0043	86	70	130	0.0	20	
Potassium			82.0	mg/L	1.0	114	70	130	5.8	20	
Sodium			1280	mg/L	1.0		70	130	6.5	20	Α
Method:	E200.7									Bato	h: 105433
Lab ID:	MB-105433	13 Me	thod Blank				Run: ICP20)3-B_161228A		12/28	/16 12:58
Antimony			ND	mg/L	0.02						
Barium			ND	mg/L	0.0003						
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.0008						
Calcium			ND	mg/L	0.03						
Chromium			ND	mg/L	0.002						
Cobalt			0.004	mg/L	0.001						
Lithium			0.007	mg/L	0.002						
Magnesium	1		ND	mg/L	0.04						
Molybdenu	m		0.006	mg/L	0.004						
Potassium			ND	mg/L	0.08						
Sodium			ND	mg/L	0.4						
Lab ID:	LCS-105433	13 Lab	oratory Co	ntrol Sample			Run: ICP20)3-B_161228A		12/28	/16 13:01
Antimony			0.529	mg/L	0.10	106	85	115			
Barium			0.531	mg/L	0.10	106	85	115			
Beryllium			0.267	mg/L	0.010	107	85	115			
Boron			0.502	mg/L	0.10	100	85	115			
Cadmium			0.257	mg/L	0.010	103	85	115			
Calcium			26.6	mg/L	1.0	106	85	115			
Chromium			0.513	mg/L	0.050	103	85	115			
Cobalt			0.522	mg/L	0.050	104	85	115			
Lithium			0.541	mg/L	0.10	107	85	115			
Magnesium	ı		26.4	mg/L	1.0	105	85	115			
Molybdenu	m		0.509	mg/L	0.10	101	85	115			
Potassium			26.4	mg/L	1.0	105	85	115			
Sodium			26.5	mg/L	1.0	106	85	115			
Lab ID:	B16121644-009BMS3	13 Sar	mple Matrix	Spike			Run: ICP20)3-B_161228A		12/28	/16 13:15
Antimony			0.551	mg/L	0.043	110	70	130			
Barium			0.539	mg/L	0.050	103	70	130			
Beryllium			0.264	mg/L	0.0010	104	70	130			
Boron			4.31	mg/L	0.050		70	130			Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	n: 105433
Lab ID:	B16121644-009BMS3	3 13 Sar	mple Matrix	Spike			Run: ICP20	3-B_161228A		12/28/	16 13:15
Cadmium			0.255	mg/L	0.0016	101	70	130			
Calcium			159	mg/L	1.0		70	130			Α
Chromium			0.489	mg/L	0.0050	98	70	130			
Cobalt			0.560	mg/L	0.0050	101	70	130			
Lithium			0.580	mg/L	0.10	102	70	130			
Magnesiun	n		45.8	mg/L	1.0	99	70	130			
Molybdenu	ım		0.532	mg/L	0.0086	102	70	130			
Potassium			37.1	mg/L	1.0	100	70	130			
Sodium			263	mg/L	1.0		70	130			Α
Lab ID:	B16121644-009BMSE) 13 Sar	mple Matrix	Spike Duplicate			Run: ICP20	3-B_161228A		12/28/	16 13:19
Antimony			0.553	mg/L	0.043	111	70	130	0.5	20	
Barium			0.535	mg/L	0.050	102	70	130	0.7	20	
Beryllium			0.265	mg/L	0.0010	105	70	130	0.4	20	
Boron			4.20	mg/L	0.050		70	130	2.6	20	Α
Cadmium			0.260	mg/L	0.0016	102	70	130	1.8	20	
Calcium			156	mg/L	1.0		70	130	1.7	20	Α
Chromium			0.488	mg/L	0.0050	98	70	130	0.3	20	
Cobalt			0.567	mg/L	0.0050	102	70	130	1.1	20	
Lithium			0.580	mg/L	0.10	102	70	130	0.0	20	
Magnesiun	n		45.5	mg/L	1.0	98	70	130	0.6	20	
Molybdenu	ım		0.517	mg/L	0.0086	99	70	130	2.8	20	
Potassium			36.8	mg/L	1.0	99	70	130	0.7	20	
Sodium			256	mg/L	1.0		70	130	2.4	20	Α
Lab ID:	B16121664-001BMS3	3 13 Sar	nple Matrix	Spike			Run: ICP20	3-B_161228A		12/28/	16 14:53
Antimony			0.538	mg/L	0.022	108	70	130			
Barium			0.631	mg/L	0.050	106	70	130			
Beryllium			0.265	mg/L	0.0010	106	70	130			
Boron			0.547	mg/L	0.050	105	70	130			
Cadmium			0.259	mg/L	0.0010	104	70	130			
Calcium			55.2	mg/L	1.0	108	70	130			
Chromium			0.515	mg/L	0.0050	103	70	130			
Cobalt			0.524	mg/L	0.0050	104	70	130			
Lithium			0.605	mg/L	0.10	108	70	130			
Magnesiun	n		33.4	mg/L	1.0	109	70	130			
Molybdenu	ım		0.509	mg/L	0.0043	102	70	130			
Potassium			32.4	mg/L	1.0	109	70	130			
Sodium			81.6	mg/L	1.0	107	70	130			
Lab ID:	B16121664-001BMSE) 13 Sar	nple Matrix	Spike Duplicate				3-B_161228A		12/28/	16 14:56
Antimony			0.517	mg/L	0.022	103	70	130	4.1	20	
Barium			0.627	mg/L	0.050	106	70	130	0.6	20	
Beryllium			0.264	mg/L	0.0010	106	70	130	0.5	20	
Boron			0.542	mg/L	0.050	104	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	n: 105433
Lab ID:	B16121664-001BMSE	13 Sam	ple Matrix	Spike Duplicate			Run: ICP20	3-B_161228A		12/28/	16 14:56
Cadmium			0.261	mg/L	0.0010	105	70	130	8.0	20	
Calcium			55.2	mg/L	1.0	107	70	130	0.1	20	
Chromium			0.513	mg/L	0.0050	103	70	130	0.5	20	
Cobalt			0.525	mg/L	0.0050	104	70	130	0.2	20	
Lithium			0.600	mg/L	0.10	107	70	130	8.0	20	
Magnesium	า		33.2	mg/L	1.0	108	70	130	0.5	20	
Molybdenu	m		0.518	mg/L	0.0043	104	70	130	1.7	20	
Potassium			32.2	mg/L	1.0	108	70	130	0.7	20	
Sodium			81.3	mg/L	1.0	106	70	130	0.3	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS206-B	_161223A
Lab ID:	QCS	9 Init	al Calibratio	on Verificatio	n Standard					12/23	16 12:57
Arsenic			0.0491	mg/L	0.0050	98	90	110			
Barium			0.0500	mg/L	0.10	100	90	110			
Beryllium			0.0245	mg/L	0.0010	98	90	110			
Cadmium			0.0251	mg/L	0.0010	100	90	110			
Chromium			0.0500	mg/L	0.010	100	90	110			
Cobalt			0.0511	mg/L	0.010	102	90	110			
Lead			0.0482	mg/L	0.010	96	90	110			
Selenium			0.0504	mg/L	0.0050	101	90	110			
Thallium			0.0485	mg/L	0.10	97	90	110			
Method:	E200.8									Batc	h: 105395
Lab ID:	MB-105395	9 Me	thod Blank				Run: ICPM	S206-B_161223A		12/23	16 14:36
Arsenic			ND	mg/L	7E-05						
Barium			ND	mg/L	9E-05						
Beryllium			ND	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-105395	9 Lat	oratory Cor	ntrol Sample			Run: ICPM	S206-B_161223A		12/23	16 14:53
Arsenic			0.487	mg/L	0.0010	97	85	115			
Barium			0.504	mg/L	0.010	101	85	115			
Beryllium			0.235	mg/L	0.0010	94	85	115			
Cadmium			0.246	mg/L	0.0010	98	85	115			
Chromium			0.498	mg/L	0.0010	100	85	115			
Cobalt			0.507	mg/L	0.0010	101	85	115			
Lead			0.498	mg/L	0.0010	100	85	115			
Selenium			0.504	mg/L	0.0050	101	85	115			
Thallium			0.493	mg/L	0.0010	99	85	115			
Lab ID:	B16121242-002AMS	9 Sai	mple Matrix	Spike			Run: ICPM	S206-B_161223A		12/23	16 14:56
Arsenic			0.941	mg/L	0.0010	94	70	130			
Barium			1.04	mg/L	0.050	98	70	130			
Beryllium			0.442	mg/L	0.0010	88	70	130			
Cadmium			0.452	mg/L	0.0010	91	70	130			
Chromium			0.964	mg/L	0.0050	96	70	130			
Cobalt			0.961	mg/L	0.0050	96	70	130			
Lead			0.974	mg/L	0.0010	97	70	130			
Selenium			0.971	mg/L	0.0010	97	70	130			
Thallium			0.925	mg/L	0.00050	92	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	: 105395
Lab ID:	B16121242-002AMS	9 Sam	ple Matrix	Spike Duplicate			Run: ICPM	S206-B_161223A		12/23/	16 14:59
Arsenic			0.992	mg/L	0.0010	99	70	130	5.4	20	
Barium			1.07	mg/L	0.050	102	70	130	3.3	20	
Beryllium			0.454	mg/L	0.0010	91	70	130	2.7	20	
Cadmium			0.466	mg/L	0.0010	93	70	130	3.0	20	
Chromium			0.999	mg/L	0.0050	100	70	130	3.6	20	
Cobalt			0.987	mg/L	0.0050	99	70	130	2.6	20	
Lead			1.01	mg/L	0.0010	101	70	130	3.5	20	
Selenium			0.974	mg/L	0.0010	97	70	130	0.3	20	
Thallium			0.986	mg/L	0.00050	99	70	130	6.4	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte	1	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	l Run: I	CPMS206-B	_161228A
Lab ID:	QCS	10 Init	ial Calibrati	on Verification	Standard					12/28	/16 10:21
Antimony			0.0480	mg/L	0.050	96	90	110			
Arsenic			0.0488	mg/L	0.0050	98	90	110			
Beryllium			0.0238	mg/L	0.0010	95	90	110			
Cadmium			0.0251	mg/L	0.0010	100	90	110			
Chromium			0.0506	mg/L	0.010	101	90	110			
Cobalt			0.0506	mg/L	0.010	101	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Molybdenu	ım		0.0469	mg/L	0.0050	94	90	110			
Selenium			0.0490	mg/L	0.0050	98	90	110			
Thallium			0.0483	mg/L	0.10	97	90	110			
Method:	E200.8									Batc	h: 105432
Lab ID:	MB-105432	2 Me	thod Blank				Run: ICPM	S206-B_161228	4	12/28	/16 14:26
Antimony			ND	mg/L	3E-05			_			
Molybdenu	ım		ND	mg/L	3E-05						
Lab ID:	LCS-105432	2 Lah	oratory Co	ntrol Sample			Run: ICPMS	S206-B_161228/	Δ	12/28	/16 14:46
Antimony			0.502	mg/L	0.0010	100	85	115	•	12,20	, 10 11.10
Molybdenu	ım		0.503	mg/L	0.0010	101	85	115			
•			0.000	mg/L	0.0010	101					
Lab ID:	B16121251-020AMS3	2 Sar	mple Matrix					S206-B_161228	4	12/28	/16 14:49
Antimony			0.506	mg/L	0.0010	101	70	130			
Molybdenu	ım		0.516	mg/L	0.0010	99	70	130			
Lab ID:	B16121251-020AMSD	2 Sar	mple Matrix	Spike Duplica	ate		Run: ICPM	S206-B_161228/	4	12/28	/16 14:53
Antimony			0.507	mg/L	0.0010	101	70	130	0.2	20	
Molybdenu	ım		0.515	mg/L	0.0010	99	70	130	0.3	20	
Lab ID:	B16121644-003BMS3	2 Sai	mple Matrix	Snike			Run: ICPM	S206-B_161228/	Δ	12/28	/16 14:56
Antimony			0.345	mg/L	0.0010	69	70	130	•	.2,20	S
Molybdenu	ım		0.508	mg/L	0.0010	102	70	130			_
•		0 -		-					_		
Lab ID:	B16121644-003BMSD	2 Sai		Spike Duplica				S206-B_161228/			/16 14:59
Antimony			0.322	mg/L	0.0010	64	70	130	6.9	20	S
Molybdenu	ım		0.483	mg/L	0.0010	97	70	130	5.0	20	
Method:	E200.8									Batc	h: 105433
Lab ID:	MB-105433	10 Me	thod Blank				Run: ICPM	S206-B_161228	4	12/28	/16 16:09
Antimony			ND	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Beryllium			ND	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	ım		ND	mg/L	3E-05						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 10543
Lab ID:	MB-105433	10 Met	thod Blank				Run: ICPM	S206-B_161228A		12/28/	16 16:09
Selenium			ND	mg/L	0.0004			_			
Thallium			ND	mg/L	1.0E-05						
Lab ID:	LCS-105433	10 Lab	oratory Cor	ntrol Sample			Run: ICPM	S206-B_161228A		12/28/	16 16:19
Antimony			0.520	mg/L	0.0010	104	85	115			
Arsenic			0.502	mg/L	0.0010	100	85	115			
Beryllium			0.241	mg/L	0.0010	96	85	115			
Cadmium			0.259	mg/L	0.0010	104	85	115			
Chromium			0.496	mg/L	0.0050	99	85	115			
Cobalt			0.517	mg/L	0.0050	103	85	115			
Lead			0.517	mg/L	0.0010	103	85	115			
Molybdenu	ım		0.501	mg/L	0.0010	100	85	115			
Selenium			0.526	mg/L	0.0010	105	85	115			
Thallium			0.521	mg/L	0.00050	104	85	115			
Lab ID:	B16121644-009BMS3	10 Sar	nple Matrix	Spike			Run: ICPM	S206-B_161228A		12/28/	16 16:22
Antimony			0.530	mg/L	0.0010	106	70	130			
Arsenic			0.492	mg/L	0.0010	98	70	130			
Beryllium			0.223	mg/L	0.0010	88	70	130			
Cadmium			0.261	mg/L	0.0010	103	70	130			
Chromium			0.480	mg/L	0.0050	96	70	130			
Cobalt			0.546	mg/L	0.0050	100	70	130			
Lead			0.505	mg/L	0.0010	101	70	130			
Molybdenu	ım		0.515	mg/L	0.0010	103	70	130			
Selenium			0.496	mg/L	0.0010	99	70	130			
Thallium			0.495	mg/L	0.00050	99	70	130			
Lab ID:	B16121644-009BMSE) 10 Sar						S206-B_161228A			16 16:25
Antimony			0.520	mg/L	0.0010	104	70	130	2.0	20	
Arsenic			0.496	mg/L	0.0010	99	70	130	8.0	20	
Beryllium			0.223	mg/L	0.0010	88	70	130	0.0	20	
Cadmium			0.260	mg/L	0.0010	102	70	130	0.7	20	
Chromium			0.494	mg/L	0.0050	99	70	130	2.8	20	
Cobalt			0.579	mg/L	0.0050	107	70	130	5.9	20	
Lead			0.510	mg/L	0.0010	102	70	130	1.0	20	
Molybdenu	ım		0.514	mg/L	0.0010	103	70	130	0.2	20	
Selenium			0.510	mg/L	0.0010	102	70	130	2.7	20	
Thallium			0.499	mg/L	0.00050	100	70	130	0.9	20	
Lab ID:	B16121664-001BMS3	10 Sar	mple Matrix	Spike			Run: ICPM	S206-B_161228A		12/28/	16 18:01
Antimony			0.505	mg/L	0.0010	101	70	130			
Arsenic			0.485	mg/L	0.0010	97	70	130			
Beryllium			0.235	mg/L	0.0010	94	70	130			
Cadmium			0.250	mg/L	0.0010	100	70	130			
Chromium			0.485	mg/L	0.0050	97	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 105433
Lab ID:	B16121664-001BMS3	3 10 Sa	mple Matrix	Spike			Run: ICPM	S206-B_161228 <i>A</i>	١	12/28	/16 18:01
Cobalt			0.509	mg/L	0.0050	102	70	130			
Lead			0.505	mg/L	0.0010	101	70	130			
Molybdenu	ım		0.496	mg/L	0.0010	99	70	130			
Selenium			0.503	mg/L	0.0010	101	70	130			
Thallium			0.497	mg/L	0.00050	99	70	130			
Lab ID:	B16121664-001BMSI	o 10 Sa	mple Matrix	Spike Dupl	icate		Run: ICPM	S206-B_161228 <i>A</i>		12/28	/16 18:04
Antimony			0.515	mg/L	0.0010	103	70	130	2.1	20	
Arsenic			0.481	mg/L	0.0010	96	70	130	8.0	20	
Beryllium			0.232	mg/L	0.0010	93	70	130	1.2	20	
Cadmium			0.255	mg/L	0.0010	102	70	130	1.7	20	
Chromium			0.487	mg/L	0.0050	97	70	130	0.4	20	
Cobalt			0.496	mg/L	0.0050	99	70	130	2.4	20	
Lead			0.507	mg/L	0.0010	101	70	130	0.4	20	
Molybdenu	ım		0.503	mg/L	0.0010	100	70	130	1.3	20	
Selenium			0.492	mg/L	0.0010	98	70	130	2.1	20	
Thallium			0.502	mg/L	0.00050	100	70	130	1.0	20	
Method:	E200.8							Analytica	l Run: I	CPMS206-B	_161229
Lab ID:	QCS	Init	ial Calibrati	on Verificati	on Standard					12/29	/16 14:41
Beryllium			0.0247	mg/L	0.0010	99	90	110			
Method:	E200.8									Batc	h: 105433
Lab ID:	MB-105433	10 Me	thod Blank				Run: ICPM	S206-B_161229A	١	12/29	/16 16:21
Antimony			8E-05	mg/L	3E-05						
Arsenic			ND	mg/L	7E-05						
Beryllium			ND	mg/L	9E-06						
Cadmium			ND	mg/L	2E-05						
Chromium			ND	mg/L	4E-05						
Cobalt			ND	mg/L	8E-06						
Lead			ND	mg/L	2E-05						
Molybdenu	ım		ND	mg/L	3E-05						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	1.0E-05						

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 01/09/17

Work Order: B16121644

Project: TMPA-6706-15-0060

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B	_161223B
Lab ID:	ICV	Initial	Calibration	on Verification	on Standard					12/23	/16 12:17
Mercury		C	0.00204	mg/L	0.00010	102	90	110			
Method:	E245.1									Batc	h: 105396
Lab ID:	MB-105396	Metho	od Blank				Run: HGC\	/202-B_161223B		12/23	/16 12:22
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-105396	Labo	ratory Cor	ntrol Sample	•		Run: HGC\	/202-B_161223B		12/23	/16 12:23
Mercury		C	0.00204	mg/L	0.00010	102	85	115			
Lab ID:	B16121398-001BMS	Samp	ole Matrix	Spike			Run: HGC\	/202-B_161223B		12/23	/16 12:27
Mercury		C	0.00199	mg/L	0.00010	100	70	130			
Lab ID:	B16121398-001BMSI	D Samp	ole Matrix	Spike Dupli	cate		Run: HGC\	/202-B_161223B		12/23	/16 12:29
Mercury		C	0.00203	mg/L	0.00010	101	70	130	1.6	30	
Lab ID:	B16121644-008BMS	Samp	ole Matrix	Spike			Run: HGC\	/202-B_161223B		12/23	/16 12:53
Mercury		C	0.00197	mg/L	0.00010	96	70	130			
Lab ID:	B16121644-008BMSI	D Samp	ole Matrix	Spike Dupli	cate		Run: HGC\	/202-B_161223B		12/23	/16 12:55
Mercury		C	0.00200	mg/L	0.00010	98	70	130	1.9	30	
Method:	E245.1							Analytica	l Run:	HGCV202-B	_161228A
Lab ID:	ICV	Initial	Calibration	on Verification	on Standard					12/28	/16 16:14
Mercury		C	0.00196	mg/L	0.00010	98	90	110			
Method:	E245.1									Batc	h: 105442
Lab ID:	MB-105442	Metho	od Blank				Run: HGC\	/202-B_161228A		12/28	/16 16:37
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-105442	Labo	ratory Cor	ntrol Sample)		Run: HGC\	/202-B_161228A		12/28	/16 16:39
Mercury		C	0.00199	mg/L	0.00010	100	85	115			
Lab ID:	B16121260-001BMS	Samp	ole Matrix	Spike			Run: HGC\	/202-B_161228A		12/28	/16 16:43
Mercury		C	0.00201	mg/L	0.00010	101	70	130			
Lab ID:	B16121260-001BMSI	D Samp	ole Matrix	Spike Dupli	cate		Run: HGC\	/202-B_161228A		12/28	/16 16:45
Mercury		-	0.00201		0.00010	101	70	130	0.0	30	
Lab ID:	B16121770-002AMS	Samp	ole Matrix	Spike			Run: HGC\	/202-B_161228A		12/28	/16 17:23
Mercury			0.00198	mg/L	0.00010	98	70	130			
Lab ID:	B16121770-002AMSI	D Samr	ole Matrix	Spike Dupli	cate		Run: HGC\	/202-B 161228A		12/28	/16 17:25
Mercury			0.00199	mg/L	0.00010	99	70	130	0.8	30	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run:	HGCV202-B	_161229A
Lab ID:	ICV	Init	ial Calibrati	on Verificat	tion Standard					12/29/	16 14:48
Mercury			0.00191	mg/L	0.00010	96	90	110			
Method:	E245.1									Batcl	h: 105510
Lab ID:	MB-105510	Me	thod Blank				Run: HGC\	/202-B_161229 <i>A</i>	١	12/29/	16 15:16
Mercury			ND	mg/L	4E-06						
Lab ID:	LCS-105510	Lak	ooratory Co	ntrol Samp	le		Run: HGC\	/202-B_161229 <i>A</i>	4	12/29/	16 15:18
Mercury			0.00198	mg/L	0.00010	99	85	115			
Lab ID:	B16121958-001CMS	Sai	mple Matrix	Spike			Run: HGC\	/202-B_161229 <i>A</i>	١	12/29/	16 15:30
Mercury			0.00208	mg/L	0.00010	104	70	130			
Lab ID:	B16121958-001CMSI	D Sai	mple Matrix	Spike Dup	licate		Run: HGC\	/202-B_161229 <i>A</i>	١	12/29/	16 15:32
Mercury			0.00206	mg/L	0.00010	103	70	130	1.1	30	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 1	_161223A
Lab ID:	ICV	2 Initi	al Calibratio	n Verification Sta	ndard					12/23/	/16 09:43
Chloride			2.03	mg/L	1.0	90	90	110			
Sulfate			8.41	mg/L	1.0	93	90	110			
Method:	E300.0									Batch:	R272287
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_16	1223A	12/23/	/16 09:57
Chloride			ND	mg/L	0.008						
Sulfate			ND	mg/L	0.06						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 1_16	1223A	12/23/	/16 10:11
Chloride			9.99	mg/L	1.0	100	90	110			
Sulfate			29.6	mg/L	1.0	99	90	110			
Lab ID:	B16121644-002AMS	2 Sar	nple Matrix	Spike			Run: IC ME	TROHM 1_16	1223A	12/23/	/16 14:09
Chloride			10.5	mg/L	1.0	104	90	110			
Sulfate			31.1	mg/L	1.0	103	90	110			
Lab ID:	B16121644-002AMSE) 2 Sar	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_16	1223A	12/23/	/16 14:23
Chloride			10.5	mg/L	1.0	105	90	110	0.6	20	
Sulfate			31.2	mg/L	1.0	104	90	110	0.5	20	
Lab ID:	B16121645-004AMS	2 Sar	nple Matrix	Spike			Run: IC ME	TROHM 1_161	1223A	12/23/	/16 17:25
Chloride			53.1	mg/L	1.0	103	90	110			
Sulfate			163	mg/L	1.0	102	90	110			
Lab ID:	B16121645-004AMSE) 2 Sar	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_161	1223A	12/23/	/16 17:39
Chloride			53.4	mg/L	1.0	103	90	110	0.6	20	
Sulfate			165	mg/L	1.0	103	90	110	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:01/09/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 2	_161227A
Lab ID:	ICV	2 Init	tial Calibratio	n Verification Sta	andard					12/27/	16 16:07
Chloride			2.07	mg/L	1.0	92	90	110			
Sulfate			8.64	mg/L	1.0	96	90	110			
Method:	E300.0									Batch:	R272357
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_16	1227A	12/27/	16 16:22
Chloride			ND	mg/L	0.004						
Sulfate			ND	mg/L	0.02						
Lab ID:	LFB	2 La	boratory Fort	ified Blank			Run: IC ME	TROHM 2_161	1227A	12/27/	16 16:36
Chloride			10.4	mg/L	1.0	104	90	110			
Sulfate			31.1	mg/L	1.0	104	90	110			
Lab ID:	B16121479-001AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_16	1227A	12/27/	16 17:19
Chloride			1210	mg/L	3.0	105	90	110			
Sulfate			1620	mg/L	9.1	105	90	110			
Lab ID:	B16121479-001AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_16	1227A	12/27/	16 17:34
Chloride			1160	mg/L	3.0	95	90	110	4.2	20	
Sulfate			1610	mg/L	9.1	104	90	110	0.3	20	
Lab ID:	B16121644-017AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_161	1227A	12/27/	16 20:42
Chloride			5130	mg/L	12	99	90	110			
Sulfate			8500	mg/L	37	105	90	110			
Lab ID:	B16121644-017AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_161	1227A	12/27/	16 20:56
Chloride			5110	mg/L	12	98	90	110	0.4	20	
Sulfate			8440	mg/L	37	104	90	110	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:01/12/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte	Result Units	RL %REC Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0			Batch: RA226-8357
Lab ID: LCS-RA226-8357	Laboratory Control Sample	Run: G542M_170103B	01/11/17 14:24
Radium 226	10 pCi/L	100 80 120	
Lab ID: MB-RA226-8357	Method Blank	Run: G542M_170103B	01/11/17 14:24
Radium 226	0.003 pCi/L		U
Radium 226 precision (±)	0.1 pCi/L		
Radium 226 MDC	0.2 pCi/L		
Lab ID: B16121644-008CMS	Sample Matrix Spike	Run: G542M_170103B	01/11/17 14:24
Radium 226	28 pCi/L	96 70 130	
Lab ID: B16121644-008CMSD	Sample Matrix Spike Duplicate	Run: G542M_170103B	01/11/17 14:24
Radium 226	24 pCi/L	79 70 130	17 20

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:01/12/17Project:TMPA-6706-15-0060Work Order:B16121644

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA	228-5391
Lab ID: LCS-228-RA226-8357	Laboratory Co	ntrol Sample			Run: G500	0W_170103B		01/06	/17 11:14
Radium 228	7.4	pCi/L		105	80	120			
Lab ID: MB-RA226-8357	Method Blank				Run: G500	0W_170103B		01/06	/17 12:23
Radium 228	-0.2	pCi/L							U
Radium 228 precision (±)	1	pCi/L							
Radium 228 MDC	2	pCi/L							
Lab ID: B16121644-015CMS	Sample Matrix	(Spike			Run: G500	0W_170103B		01/06	/17 11:15
Radium 228	25	pCi/L		115	70	130			
Lab ID: B16121644-015CMSD	Sample Matrix	Spike Duplicate			Run: G500	0W_170103B		01/06	/17 11:15
Radium 228	18	pCi/L		76	70	130	31	20	R

⁻ Due to nonhomogeneity of the sample the Duplicate RPD is outside of the acceptance range for this analysis.

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Leslie S. Cadreau

B16121644

Date Received: 12/22/2016

0 ,					
Reviewed by:	BL2000\cindy		Re	eceived by: lab	
Reviewed Date:	12/28/2016		Car	rrier name: Return-UPS NDA	
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all s	nipping container(s)/cooler(s)?	Yes √	No 🗌	Not Present	
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes ✓	No 🗌		
Chain of custody signed who	en relinquished and received?	Yes ✓	No 🗌		
Chain of custody agrees with	n sample labels?	Yes	No ✓		
Samples in proper container	/bottle?	Yes ✓	No 🗌		
Sample containers intact?		Yes ✓	No 🗌		
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌		
All samples received within h (Exclude analyses that are c such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Applicable	
Container/Temp Blank tempe	erature:	°C On Ice			
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted 🗸	
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Submitted via EnergyExpress on 12/22/2016 1:31:07 PM

The Temperature Blank temperature for Cooler 1 was 3.6°C melted ice and Cooler 2 was 1.5°C on ice.

The collection time for sample EQBK-MPS-122116 is 13:15 on the Chain of Custody but on the container label it's 13:00. Proceeded with the collection time as indicated on the Chain of Custody.

Samples AP-MW3, SFL-MW1, EQBK-MPS 12116, DUP-2, SSP-MW4, EQBK 12-20-16/SCM, AP-MW5, DUP-1, SFL-MW5, SFL-MW3, SFL-MW4 and EQBK 12-22-16/SCM were received on 12/23/16 at 09:45 by Lisa Bradley on ice from Return UPS NDA. The Temperature Blank temperature for Cooler 1 was 0.6°C, Cooler 2 was 0.2°C, Cooler 3 was 0.0°C and Cooler 4 was 0.1°C.



Chain of Custody & Analytical Request Record

		Report Inf	ormation (#	f different than	Report Information (if different than Account Information)	(u)	Comments	rage oror
ATEL TOTES	Wheeler	Contract		į			Z	
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	X FERCH	City, State, Zip) (512, 745, 0265
604	FW.COM	Email					<u> </u>	
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	Bottle Order	Special Report/Formats:	ر ک	☐ EDD/EDT (contact laboratory)	r (aboratory) □ Other	er.		
Project Information		Matrix Codes			Analysis Democrate			
Project Name, PWSID, Permit, etc. TPPA-6-706-15.006.0	5.0060	A - Air W- Water		-	Name of the last	Dalcar		All turnaround times are
Sampler Name (1450) STEVELLS Sampler Phone 512. 745. 0200	512.745.0360	S Soils/ Solids	T				-	standard unless marked as RUSH.
Sample Origin State TEXAS EPA/State Co	EPA/State Compliance	V - Vegetation B - Bioassay		· ·				Energy Laboratories
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. Byproduct 11 (e)2 material Unprocessed ore (NOT ground or refined)*	OT ground or refined)*	O - Other DW - Drinking	7/43 7/43				rsched	RUSH sample submittal for charges and scheduling –
Sample Identification (Name, Location, Interval, etc.)	9 8	Number of Matrix Containers (5ee Codes	भञ्ज					1.60
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Chain of Custody & Analytical Request Record

Account Information (Billing information)		Report Info	rmation //c	Report Information # d#kmast		(10 10 10 10 10 10 10 10 10 10 10 10 10 1
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Project Information		Matrix Codes					
4		A - Air		Analysis Requested	equested		
Project Name, PWSID, Permit, etc. M.P.A.	6706150060	W- Water	_				All turnaround times are
Sampler Name Samuel Macon Sampler Phone 512-413	10 512-413-387	S Solids	C			-	RUSH.
Sample Origin State Texas EPA/State C	EPA/State Compliance	V - Vegetation B - Bioassay	- To				Energy Laboratories MUST be contacted prior to
MINING CLIENTS, please indicate sample type. *If ore has been processed or refined, call before sending. □ Byproduct 11 (e)2 material	ple type. alt before sending. Unprocessed ore (NOT around or refined)*	O - Other DW - Drinking Water	<u>' </u>	almin		sched	RUSH sample submittal for charges and scheduling —
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(Name, Location, Interval, etc.)	ime	Containers (See Codes Above)	5			See	
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	11 5 7 CM		L ABORATORY USE ONE	THE VALLEY	12-23-16 97-57	243	SIA 5/11/11/2
Shipped By Cooler ID(s) Custody Seals	Intact Receipt Temp	Temp F	On Ice	Payr	Amount	Receipt Nu	Receipt Number (cash/chack only)
	<u>.</u>			CC Cash Check	\$		Marin Company

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

(ii)	Trust our Date	
NERGY	Trust our People, Trust our Data	

Chain of Custody & Analytical Request Record

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 22, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17021678 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 19 samples for Texas Municipal Power Agency on 2/24/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17021678-001	APMW-3	02/20/17 17:	55 02/24/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17021678-002	APMW-1D	02/21/17 9:5	2 02/24/17	Ground Water	Same As Above
B17021678-003	APMW-5	02/21/17 11:	31 02/24/17	Ground Water	Same As Above
B17021678-004	APMW-4	02/21/17 12:	40 02/24/17	Ground Water	Same As Above
B17021678-005	EQBK-BJG-22117	02/21/17 13:	45 02/24/17	Ground Water	Same As Above
B17021678-006	SSP/APMW-1	02/21/17 14:	52 02/24/17	Ground Water	Same As Above
B17021678-007	SSPMW-2	02/21/17 15:	55 02/24/17	Ground Water	Same As Above
B17021678-008	SSPMW-4	02/21/17 17:	01 02/24/17	Ground Water	Same As Above
B17021678-009	SSPMW-3	02/22/17 9:3	7 02/24/17	Ground Water	Same As Above
B17021678-011	SLFMW-6	02/22/17 14:	27 02/24/17	Ground Water	Same As Above
B17021678-012	SFLMW-4	02/22/17 15:	50 02/24/17	Ground Water	Same As Above
B17021678-013	SFLMW-2	02/22/17 17:	09 02/24/17	Ground Water	Same As Above
B17021678-014	EQBK-BJG-22217	02/22/17 17:	55 02/24/17	Ground Water	Same As Above
B17021678-015	SFLMW-5	02/23/17 9:0	2 02/24/17	Ground Water	Same As Above
B17021678-016	SFLMW-3	02/23/17 10:	16 02/24/17	Ground Water	Same As Above
B17021678-017	EQBK-BJG-22317	02/23/17 11:	20 02/24/17	Ground Water	Same As Above
B17021678-018	DUP-1	02/21/17 0:0	0 02/24/17	Ground Water	Same As Above
B17021678-019	DUP-2	02/22/17 0:0	0 02/24/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/22/17

Report Date: 03/14/17

 Project:
 TMPA 6706150060
 Report Date: 03/14/17

 Work Order:
 B17021678
 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

The Total Dissolved Solids analysis for sample APMW-3 (B17021678-001) was performed outside the EPA recommended hold time.

We apologize for any inconvenience this may have caused.

For sample APMW-5 (B17021678-005) results for Major Ions, pH, TDS, Chloride, Sulfate, Fluoride and Barium were confirmed by re-analysis.

Revised Report 12/22/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte	Original Reporting Limit (mg/L)	Revised Reporting limit (mg/L)
Antimony Cadmium Thallium	0.05 0.01 0.01	0.006 0.005 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-001

 Client Sample ID:
 APMW-3

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/20/17 17:55
DateReceived: 02/24/17

Matrix: Ground Water

MAJOR IONS Calcium 132 mg/L 1 E200.7 02/28/17 23:38 / rlh Magnesium 20 mg/L 1 E200.7 02/28/17 23:38 / rlh Potassium 12 mg/L 1 E200.7 02/28/17 23:38 / rlh Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES 1 E200.7 02/28/17 23:38 / rlh Solids, Total Dissolved TDS @ 180 C 1400 mg/L DH 20 A2540 C 02/28/17 08:38 / rik
Calcium 132 mg/L 1 E200.7 02/28/17 23:38 / rlh Magnesium 20 mg/L 1 E200.7 02/28/17 23:38 / rlh Potassium 12 mg/L 1 E200.7 02/28/17 23:38 / rlh Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
Magnesium 20 mg/L 1 E200.7 02/28/17 23:38 / rlh Potassium 12 mg/L 1 E200.7 02/28/17 23:38 / rlh Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
Magnesium 20 mg/L 1 E200.7 02/28/17 23:38 / rlh Potassium 12 mg/L 1 E200.7 02/28/17 23:38 / rlh Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
Potassium 12 mg/L 1 E200.7 02/28/17 23:38 / rlh Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
Sodium 226 mg/L 1 E200.7 02/28/17 23:38 / rlh PHYSICAL PROPERTIES pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
pH 5.4 s.u. H 0.1 A4500-H B 02/24/17 14:16 / pjw
1
Solids, Total Dissolved TDS @ 180 C 1400 mg/L DH 20 A2540 C 02/28/17 08:38 / rik
INORGANICS
Chloride 146 mg/L 1 E300.0 03/01/17 01:50 / mej
Sulfate 720 mg/L D 4 E300.0 03/01/17 01:50 / mej
Fluoride ND mg/L 0.1 A4500-F C 02/28/17 11:09 / cjm
METALS, TOTAL RECOVERABLE
Antimony ND mg/L 0.006 E200.8 03/01/17 02:11 / mas
Arsenic ND mg/L 0.01 E200.8 03/01/17 02:11 / mas
Barium 0.02 mg/L 0.01 E200.7 02/28/17 23:38 / rlh
Beryllium 0.003 mg/L 0.001 E200.7 02/28/17 23:38 / rlh
Boron 3.61 mg/L 0.05 E200.7 02/28/17 23:38 / rlh
Cadmium ND mg/L 0.005 E200.8 03/01/17 02:11 / mas
Chromium ND mg/L 0.01 E200.7 02/28/17 23:38 / rlh
Cobalt 0.04 mg/L 0.02 E200.7 02/28/17 23:38 / rlh
Lead ND mg/L 0.01 E200.8 03/01/17 02:11 / mas
Lithium 0.06 mg/L 0.01 E200.7 02/28/17 23:38 / rlh
Mercury ND mg/L 0.001 E245.1 02/27/17 16:01 / jh
Molybdenum ND mg/L 0.05 E200.7 02/28/17 23:38 / rlh
Selenium ND mg/L 0.01 E200.8 03/01/17 02:11 / mas
Thallium ND mg/L 0.002 E200.8 03/01/17 02:11 / mas
RADIONUCLIDES - TOTAL
Radium 226 0.77 pCi/L E903.0 03/13/17 09:06 / eli-co
Radium 226 precision (±) 0.19 pCi/L E903.0 03/13/17 09:06 / eli-co
Radium 226 MDC 0.19 pCi/L E903.0 03/13/17 09:06 / eli-co
Radium 228 1.7 pCi/L RA-05 03/07/17 13:37 / eli-05
Radium 228 precision (±) 0.84 pCi/L RA-05 03/07/17 13:37 / eli-co
Radium 228 MDC 1.4 pCi/L RA-05 03/07/17 13:37 / eli-co
Radium 226 + Radium 228 2.4 pCi/L A7500-RA 03/13/17 11:18 / eli-co
Radium 226 + Radium 228 precision (±) 0.9 pCi/L A7500-RA 03/13/17 11:18 / eli-co
Radium 226 + Radium 228 MDC 1.5 pCi/L A7500-RA 03/13/17 11:18 / eli-c

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

ADD Main to the tele

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-002 Client Sample ID: APMW-1D

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 09:52 DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesuit	Units	Qualifiers	INE.	QUL	Wiethou	Allalysis Date / Dy
MAJOR IONS							
Calcium	77	mg/L		1		E200.7	02/28/17 23:42 / rlh
Magnesium		mg/L		1		E200.7	02/28/17 23:42 / rlh
Potassium	12	mg/L		1		E200.7	02/28/17 23:42 / rlh
Sodium	322	mg/L		1		E200.7	02/28/17 23:42 / rlh
PHYSICAL PROPERTIES							
pH	6.1	s.u.	Н	0.1		A4500-H B	02/24/17 14:21 / pjw
Solids, Total Dissolved TDS @ 180 C	1310	mg/L	D	20		A2540 C	02/28/17 08:38 / rik
INORGANICS							
Chloride	228	mg/L		1		E300.0	03/01/17 02:07 / mej
Sulfate		mg/L	D	4		E300.0	03/01/17 02:07 / mej
Fluoride	0.7	mg/L		0.1		A4500-F C	02/28/17 11:12 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 02:24 / mas
Arsenic	0.01	mg/L		0.01		E200.8	03/01/17 02:24 / mas
Barium	0.01	mg/L		0.01		E200.7	02/28/17 23:42 / rlh
Beryllium	ND	mg/L		0.001		E200.7	02/28/17 23:42 / rlh
Boron	4.88	mg/L		0.05		E200.7	02/28/17 23:42 / rlh
Cadmium	ND	mg/L		0.005		E200.7	02/28/17 23:42 / rlh
Chromium	ND	mg/L		0.01		E200.7	02/28/17 23:42 / rlh
Cobalt	ND	mg/L		0.02		E200.7	02/28/17 23:42 / rlh
Lead	ND	mg/L		0.01		E200.8	03/01/17 02:24 / mas
Lithium	0.04	mg/L		0.01		E200.7	02/28/17 23:42 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:03 / jh
Molybdenum	ND	mg/L		0.05		E200.7	02/28/17 23:42 / rlh
Selenium	ND	mg/L		0.01		E200.8	03/01/17 02:24 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 02:24 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.37	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	0.21	pCi/L	U			RA-05	03/07/17 13:37 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 13:37 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	03/07/17 13:37 / eli-ca
Radium 226 + Radium 228	0.6	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-003 Client Sample ID: APMW-5

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 11:31 DateReceived: 02/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	494	mg/L		1		E200.7	02/28/17 23:45 / rlh
Magnesium		mg/L		1		E200.7	02/28/17 23:45 / rlh
Potassium		mg/L		1		E200.7	02/28/17 23:45 / rlh
Sodium		mg/L	D	4		E200.7	02/28/17 23:45 / rlh
PHYSICAL PROPERTIES							
pH	3.6	s.u.	Н	0.1		A4500-H B	02/24/17 14:23 / pjw
Solids, Total Dissolved TDS @ 180 C	4860		D	40		A2540 C	02/28/17 08:38 / rik
INORGANICS							
Chloride	490	mg/L	D	6		E300.0	03/01/17 02:23 / mej
Sulfate	2880	•	D	20		E300.0	•
Fluoride		mg/L	D	0.1		A4500-F C	03/01/17 02:23 / mej 02/28/17 11:21 / cjm
ridonde	1.2	IIIg/L		0.1		A4300-F C	02/20/17 11.21 / GJIII
METALS, TOTAL RECOVERABLE							
Antimony		mg/L		0.006		E200.8	03/01/17 02:28 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 02:28 / mas
Barium	0.04	mg/L		0.01		E200.7	02/28/17 23:45 / rlh
Beryllium	0.089	mg/L		0.001		E200.7	02/28/17 23:45 / rlh
Boron	3.32	mg/L		0.05		E200.7	02/28/17 23:45 / rlh
Cadmium	0.010	mg/L		0.005		E200.8	03/01/17 02:28 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 02:28 / mas
Cobalt	0.18	mg/L		0.02		E200.8	03/01/17 02:28 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 02:28 / mas
Lithium	0.53	mg/L	D	0.04		E200.7	02/28/17 23:45 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:05 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 02:28 / mas
Selenium	0.01	mg/L		0.01		E200.8	03/01/17 02:28 / mas
Thallium	0.002	mg/L		0.002		E200.8	03/01/17 02:28 / mas
RADIONUCLIDES - TOTAL							
Radium 226	1.5	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.40	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	0.31	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	1.8	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-004

 Client Sample ID:
 APMW-4

Collection Date: 02/21/17 12:40
DateReceived: 02/24/17
Matrix: Ground Water

Report Date: 03/14/17

Revised Date: 12/22/17

Solids, Total Dissolved TDS @ 180 C	Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Calcium 488 mg/L 1 E200.7 02/28/17 23:56 / rlh Magnesium 112 mg/L 1 E200.7 02/28/17 23:56 / rlh Potassium 45 mg/L 1 E200.7 02/28/17 23:56 / rlh Sodium 490 mg/L D 2 E200.7 02/28/17 23:56 / rlh PHYSICAL PROPERTIES pH 5.9 s.u. H 0.1 A4500-H B 02/24/17 14:26 / pjw Solids, Total Dissolved TDS @ 180 C 4130 mg/L D 40 A2540 C 02/28/17 08:38 / rik INORGANICS Chloride 503 mg/L D 3 E300.0 03/01/17 02:40 / mej Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej Fluoride ND mg/L 0.1 A4500-F C 02/27/17 14:31 / cjm METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas <	MA IOD IONS							
Magnesium 112 mg/L 1 mg/L 2 mg/L 1 mg/L 1 mg/L 1 mg/L 2 mg/L 1 mg/L 1 mg/L 1 mg/L 2 mg/L 1 mg/L 1 mg/L 1 mg/L 1 mg/L 1 mg/L 2		400	· /1		4		F200 7	00/00/47 00.50 /
Potassium			•					
Sodium 490 mg/L D 2 E200.7 02/28/17 23:56 / rlh PHYSICAL PROPERTIES pH 5.9 s.u. H 0.1 A4500-H B 02/24/17 14:26 / pjw Solids, Total Dissolved TDS @ 180 C 4130 mg/L D 40 A2540 C 02/28/17 08:38 / rik INORGANICS Chloride 503 mg/L D 3 E300.0 03/01/17 02:40 / mej Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh	-		•					
PHYSICAL PROPERTIES pH			•	5	-			
pH 5.9 s.u. H 0.1 A4500-H B 02/24/17 14:26 / pjw Solids, Total Dissolved TDS @ 180 C 4130 mg/L D 40 A2540 C 02/28/17 08:38 / rik INORGANICS Chloride 503 mg/L D 3 E300.0 03/01/17 02:40 / mej Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej METALS, TOTAL RECOVERABLE METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/2/8/17 23:56 / rlh Boron 1.89 mg/L 0.001 E200.7 02/2/8/17 23:56 / rlh Chromium ND mg/L 0.005 E200.7 02/2/8/17 23:56 / rlh Chobalt ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.02 E200.8 03/01/17 02:31 / mas	Sodium	490	mg/L	D	2		E200.7	02/28/17 23:56 / rin
Solids, Total Dissolved TDS @ 180 C	PHYSICAL PROPERTIES							
NORGANICS	pH	5.9	s.u.	Н	0.1		A4500-H B	02/24/17 14:26 / pjw
Chloride 503 mg/L D 3 E300.0 03/01/17 02:40 / mej Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej Fluoride ND mg/L 0.1 A4500-F C 02/27/17 14:31 / cjm METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.8 03/01/17 02:31 / mas Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND	Solids, Total Dissolved TDS @ 180 C	4130	mg/L	D	40		A2540 C	02/28/17 08:38 / rik
Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej Fluoride ND mg/L D 9 E300.0 03/01/17 02:40 / mej METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	INORGANICS							
Sulfate 2290 mg/L D 9 E300.0 03/01/17 02:40 / mej Fluoride ND mg/L 0.1 A4500-F C 02/27/17 14:31 / cjm METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Chloride	503	mg/L	D	3		E300.0	03/01/17 02:40 / mej
METALS, TOTAL RECOVERABLE ND mg/L 0.1 A4500-F C 02/27/17 14:31 / cjm Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Sulfate		•	D			E300.0	•
Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Fluoride		•		0.1		A4500-F C	•
Antimony ND mg/L 0.006 E200.8 03/01/17 02:31 / mas Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	METALS, TOTAL RECOVERABLE							
Arsenic ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Barium 0.01 mg/L 0.01 E200.7 02/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	•	ND	mg/L		0.006		E200.8	03/01/17 02:31 / mas
Barium 0.01 mg/L 0.01 mg/L E200.7 o2/28/17 23:56 / rlh Beryllium ND mg/L 0.001 E200.7 o2/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 o2/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 o2/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 o3/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 o3/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 o3/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 o2/28/17 23:56 / rlh	•		•		0.01		E200.8	03/01/17 02:31 / mas
Beryllium ND mg/L 0.001 E200.7 02/28/17 23:56 / rlh Boron 1.89 mg/L 0.05 E200.7 02/28/17 23:56 / rlh Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Barium		_		0.01		E200.7	02/28/17 23:56 / rlh
Cadmium ND mg/L 0.005 E200.7 02/28/17 23:56 / rlh Chromium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Cobalt ND mg/L 0.02 E200.8 03/01/17 02:31 / mas Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Beryllium		•		0.001		E200.7	02/28/17 23:56 / rlh
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Boron	1.89	mg/L		0.05		E200.7	02/28/17 23:56 / rlh
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Cadmium	ND	mg/L		0.005		E200.7	02/28/17 23:56 / rlh
Lead ND mg/L 0.01 E200.8 03/01/17 02:31 / mas Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Chromium	ND	mg/L		0.01		E200.8	03/01/17 02:31 / mas
Lithium 0.87 mg/L D 0.02 E200.7 02/28/17 23:56 / rlh	Cobalt	ND	mg/L		0.02		E200.8	03/01/17 02:31 / mas
·	Lead	ND	mg/L		0.01		E200.8	03/01/17 02:31 / mas
Mercury ND ma/L 0.001 F245.1 02/27/17 16:06 / ih	Lithium	0.87	mg/L	D	0.02		E200.7	02/28/17 23:56 / rlh
	Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:06 / jh
Molybdenum ND mg/L 0.05 E200.7 02/28/17 23:56 / rlh	Molybdenum	ND	mg/L		0.05		E200.7	02/28/17 23:56 / rlh
Selenium ND mg/L 0.01 E200.8 03/01/17 02:31 / mas	Selenium	ND	mg/L		0.01		E200.8	03/01/17 02:31 / mas
Thallium ND mg/L 0.002 E200.8 03/01/17 02:31 / mas	Thallium	ND	mg/L		0.002		E200.8	03/01/17 02:31 / mas
RADIONUCLIDES - TOTAL	RADIONUCLIDES - TOTAL							
Radium 226 0.92 pCi/L E903.0 03/13/17 09:06 / eli-ca	Radium 226	0.92	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±) 0.21 pCi/L E903.0 03/13/17 09:06 / eli-ca	Radium 226 precision (±)	0.21	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC 0.20 pCi/L E903.0 03/13/17 09:06 / eli-ca	Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 09:06 / eli-ca
	Radium 228	0.29	pCi/L	U			RA-05	
Radium 228 precision (±) 1.1 pCi/L RA-05 03/07/17 15:12 / eli-ca	Radium 228 precision (±)	1.1	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC 1.8 pCi/L RA-05 03/07/17 15:12 / eli-ca	* * * * * * * * * * * * * * * * * * * *						RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228 1.2 pCi/L U A7500-RA 03/13/17 11:18 / eli-ca	Radium 226 + Radium 228	1.2	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±) 1.1 pCi/L A7500-RA 03/13/17 11:18 / eli-ca	Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC 1.8 pCi/L A7500-RA 03/13/17 11:18 / eli-ca	Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA 6706150060 Project: Lab ID: B17021678-005 Client Sample ID: EQBK-BJG-22117

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 13:45 DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Result	Ullits	Qualifiers	- INL	WOL.	Wiethou	Analysis Date / By
MAJOR IONS							
Calcium	41	mg/L		1		E200.7	02/28/17 23:59 / rlh
Magnesium		mg/L		1		E200.7	02/28/17 23:59 / rlh
Potassium	3	mg/L		1		E200.7	02/28/17 23:59 / rlh
Sodium	25	mg/L		1		E200.7	02/28/17 23:59 / rlh
PHYSICAL PROPERTIES							
pН	7.8	s.u.	Н	0.1		A4500-H B	02/24/17 14:29 / pjw
Solids, Total Dissolved TDS @ 180 C	279	mg/L		10		A2540 C	02/28/17 08:39 / rik
INORGANICS							
Chloride	31	mg/L		1		E300.0	03/01/17 02:56 / mej
Sulfate		mg/L		1		E300.0	03/01/17 02:56 / mej
Fluoride		mg/L		0.1		A4500-F C	03/13/17 14:03 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 02:34 / mas
Arsenic	ND	mg/L		0.01		E200.8	03/01/17 02:34 / mas
Barium	0.07	mg/L		0.01		E200.7	02/28/17 23:59 / rlh
Beryllium	ND	mg/L		0.001		E200.7	02/28/17 23:59 / rlh
Boron	ND	mg/L		0.05		E200.7	02/28/17 23:59 / rlh
Cadmium	ND	mg/L		0.005		E200.7	02/28/17 23:59 / rlh
Chromium	ND	mg/L		0.01		E200.7	02/28/17 23:59 / rlh
Cobalt	ND	mg/L		0.02		E200.7	02/28/17 23:59 / rlh
Lead	ND	mg/L		0.01		E200.8	03/01/17 02:34 / mas
Lithium	ND	mg/L		0.01		E200.7	02/28/17 23:59 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:08 / jh
Molybdenum	ND	mg/L		0.05		E200.7	02/28/17 23:59 / rlh
Selenium	ND	mg/L		0.01		E200.8	03/01/17 02:34 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 02:34 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.54	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	0.13	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-006 Client Sample ID: SSP/APMW-1

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 14:52 DateReceived: 02/24/17

Matrix: Ground Water

Acabasas			o !!!	D.	MCL/ QCL	Made at	Aurabasta Bata (Ba
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	617	mg/L		1		E200.7	03/01/17 00:03 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 00:03 / rlh
Potassium		mg/L		1		E200.7	03/01/17 00:03 / rlh
Sodium		mg/L	D	4		E200.7	03/01/17 00:03 / rlh
PHYSICAL PROPERTIES							
pH	6.2	s.u.	Н	0.1		A4500-H B	02/24/17 14:31 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	02/28/17 08:39 / rik
INORGANICS							
Chloride	1520	mg/L	D	6		E300.0	03/01/17 03:13 / mej
Sulfate		mg/L	D	20		E300.0	•
Fluoride		mg/L	D	0.1		A4500-F C	03/01/17 03:13 / mej 02/27/17 14:42 / cjm
ridolide	0.1	IIIg/L		0.1		A4300-P C	02/27/17 14.42 / Gjili
METALS, TOTAL RECOVERABLE							
Antimony		mg/L		0.006		E200.8	03/01/17 02:38 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 02:38 / mas
Barium		mg/L		0.01		E200.7	03/01/17 00:03 / rlh
Beryllium	ND	mg/L		0.001		E200.8	03/01/17 02:38 / mas
Boron	0.77	mg/L		0.05		E200.7	03/01/17 00:03 / rlh
Cadmium		mg/L		0.005		E200.8	03/01/17 02:38 / mas
Chromium		mg/L		0.01		E200.8	03/01/17 02:38 / mas
Cobalt		mg/L		0.02		E200.8	03/01/17 02:38 / mas
Lead		mg/L		0.01		E200.8	03/01/17 02:38 / mas
Lithium		mg/L	D	0.04		E200.7	03/01/17 00:03 / rlh
Mercury		mg/L		0.001		E245.1	02/27/17 16:10 / jh
Molybdenum		mg/L		0.05		E200.8	03/01/17 02:38 / mas
Selenium		mg/L		0.01		E200.8	03/01/17 02:38 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 02:38 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.63	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.19	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	-0.05	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	0.6	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-007 Client Sample ID: SSPMW-2

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 15:55 DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesuit	Offics	Qualificis		QUL	Wictiloa	Analysis Date / By
MAJOR IONS							
Calcium	818	mg/L		1		E200.7	03/01/17 00:06 / rlh
Magnesium	190	mg/L		1		E200.7	03/01/17 00:06 / rlh
Potassium	58	mg/L		1		E200.7	03/01/17 00:06 / rlh
Sodium	1080	mg/L	D	4		E200.7	03/01/17 00:06 / rlh
PHYSICAL PROPERTIES							
Hq	5.4	s.u.	Н	0.1		A4500-H B	02/24/17 14:34 / pjw
Solids, Total Dissolved TDS @ 180 C	6990	mg/L	D	100		A2540 C	02/28/17 08:39 / rik
INORGANICS							
Chloride	2550	mg/L	D	6		E300.0	03/01/17 04:35 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 04:35 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 14:47 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 02:41 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 02:41 / mas
Barium		mg/L		0.01		E200.7	03/01/17 00:06 / rlh
Beryllium	0.026	•		0.001		E200.7	03/01/17 00:06 / rlh
Boron		mg/L		0.05		E200.7	03/01/17 00:06 / rlh
Cadmium		mg/L		0.005		E200.8	03/01/17 02:41 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 02:41 / mas
Cobalt	0.06	mg/L		0.02		E200.8	03/01/17 02:41 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 02:41 / mas
Lithium	0.86	mg/L	D	0.04		E200.7	03/01/17 00:06 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:12 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 02:41 / mas
Selenium	ND	mg/L		0.01		E200.8	03/01/17 02:41 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 02:41 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.84	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.19	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	14	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	2.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	14.6	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	2.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-008 Client Sample ID: SSPMW-4

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 17:01 DateReceived: 02/24/17

Matrix: Ground Water

Amaluaca	Daguit	l luita	Ovalitiana	RL	MCL/ QCL	Method	Analysia Data / By
Analyses	Result	Units	Qualifiers	KL	QCL	Wethod	Analysis Date / By
MAJOR IONS							
Calcium	390	mg/L		1		E200.7	03/01/17 00:17 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 00:17 / rlh
Potassium	53	mg/L		1		E200.7	03/01/17 00:17 / rlh
Sodium	678	mg/L	D	4		E200.7	03/01/17 00:17 / rlh
PHYSICAL PROPERTIES							
рН	6.5	s.u.	Н	0.1		A4500-H B	02/24/17 14:36 / pjw
Solids, Total Dissolved TDS @ 180 C	3890	mg/L	D	40		A2540 C	02/28/17 08:39 / rik
INORGANICS							
Chloride	1180	mg/L	D	6		E300.0	03/01/17 04:51 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 04:51 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 14:50 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 20:45 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 20:45 / mas
Barium		mg/L		0.01		E200.7	03/01/17 00:17 / rlh
Beryllium	ND	mg/L		0.001		E200.8	03/01/17 20:45 / mas
Boron	1.24	mg/L		0.05		E200.7	03/01/17 00:17 / rlh
Cadmium	ND	mg/L		0.005		E200.8	03/01/17 20:45 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 20:45 / mas
Cobalt	ND	mg/L		0.02		E200.8	03/01/17 20:45 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 20:45 / mas
Lithium	0.87	mg/L	D	0.04		E200.7	03/01/17 00:17 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:21 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 20:45 / mas
Selenium		mg/L		0.01		E200.8	03/01/17 20:45 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 20:45 / mas
RADIONUCLIDES - TOTAL							
Radium 226	1.6	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	0.39	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC		pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	1.9	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-009

 Client Sample ID:
 SSPMW-3

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/22/17 09:37
DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesuit	Offics	Qualificis		QUL	Wictiloa	Analysis Date / By
MAJOR IONS							
Calcium	694	mg/L		1		E200.7	03/01/17 00:42 / rlh
Magnesium	173	mg/L		1		E200.7	03/01/17 00:42 / rlh
Potassium	48	mg/L		1		E200.7	03/01/17 00:42 / rlh
Sodium	1060	mg/L	D	4		E200.7	03/01/17 00:42 / rlh
PHYSICAL PROPERTIES							
рН	4.5	s.u.	Н	0.1		A4500-H B	02/24/17 14:39 / pjw
Solids, Total Dissolved TDS @ 180 C	6450	mg/L	D	100		A2540 C	02/28/17 08:39 / rik
INORGANICS							
Chloride	1830	mg/L	D	6		E300.0	03/01/17 05:08 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 05:08 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 14:57 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 20:49 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 20:49 / mas
Barium		mg/L		0.01		E200.7	03/01/17 00:42 / rlh
Beryllium	0.121	•		0.001		E200.8	03/01/17 20:49 / mas
Boron		mg/L		0.05		E200.7	03/01/17 00:42 / rlh
Cadmium	0.067	mg/L		0.005		E200.8	03/01/17 20:49 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 20:49 / mas
Cobalt	0.62	mg/L		0.02		E200.8	03/01/17 20:49 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 20:49 / mas
Lithium	0.66	mg/L	D	0.04		E200.7	03/01/17 00:42 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:30 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 20:49 / mas
Selenium	ND	mg/L		0.01		E200.8	03/01/17 20:49 / mas
Thallium	0.010	mg/L		0.002		E200.8	03/01/17 20:49 / mas
RADIONUCLIDES - TOTAL							
Radium 226	7.9	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 precision (±)	1.6	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 09:06 / eli-ca
Radium 228	20	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	3.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	27.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	4.1	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDO Minimum data table and

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-011 Client Sample ID: SLFMW-6

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/22/17 14:27 DateReceived: 02/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL		ethod	Analysis Date / By
MAJOR IONS							
Calcium	852	mg/L	D	2	E2	200.7	03/01/17 00:49 / rlh
Magnesium		mg/L		1		200.7	03/01/17 00:49 / rlh
Potassium		mg/L		1	E2	200.7	03/01/17 00:49 / rlh
Sodium	1570	mg/L	D	8	E2	200.7	03/01/17 00:49 / rlh
PHYSICAL PROPERTIES							
pH	4.0	s.u.	Н	0.1	A4	500-H B	02/24/17 14:44 / pjw
Solids, Total Dissolved TDS @ 180 C	8790	mg/L	D	100	A2	2540 C	02/24/17 10:38 / rik
INORGANICS							
Chloride	3570	mg/L	D	10	E3	800.0	03/01/17 05:41 / mej
Sulfate	2260	mg/L	D	40	E3	800.0	03/01/17 05:41 / mej
Fluoride	0.9	mg/L		0.1	A4	500-F C	02/27/17 15:20 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006	E2	8.00	03/01/17 20:55 / mas
Arsenic	0.01	mg/L		0.01	E2	8.00	03/01/17 20:55 / mas
Barium	0.04	mg/L		0.01	E2	200.7	03/01/17 00:49 / rlh
Beryllium	0.056	mg/L		0.001	E2	8.00	03/01/17 20:55 / mas
Boron	0.24	mg/L	D	0.07	E2	200.7	03/01/17 00:49 / rlh
Cadmium	0.013	mg/L		0.005	E2	8.00	03/01/17 20:55 / mas
Chromium	ND	mg/L		0.01	E2	8.00	03/01/17 20:55 / mas
Cobalt	0.13	mg/L		0.02	E2	8.00	03/01/17 20:55 / mas
Lead	ND	mg/L		0.01	E2	8.00	03/01/17 20:55 / mas
Lithium	0.74	mg/L	D	0.09	E2	200.7	03/01/17 00:49 / rlh
Mercury	ND	mg/L		0.001	E2	245.1	02/27/17 16:34 / jh
Molybdenum	ND	mg/L		0.05	E2	8.00	03/01/17 20:55 / mas
Selenium	0.01	mg/L		0.01	E2	8.00	03/01/17 20:55 / mas
Thallium	0.004	mg/L		0.002	E2	8.00	03/01/17 20:55 / mas
RADIONUCLIDES - TOTAL							
Radium 226	4.5	pCi/L			E9	0.800	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.92	pCi/L			E9	0.800	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.18	pCi/L			E9	0.800	03/13/17 10:39 / eli-ca
Radium 228	2.3	pCi/L			R/	\-05	03/07/17 13:37 / eli-ca
Radium 228 precision (±)	0.93	pCi/L			R/	\-05	03/07/17 13:37 / eli-ca
Radium 228 MDC	1.4	pCi/L			R/	\-05	03/07/17 13:37 / eli-ca
Radium 226 + Radium 228	6.8	pCi/L			A7	'500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L			A7	'500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L			A7	′500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-012

 Client Sample ID:
 SFLMW-4

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/22/17 15:50
DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Daault	l luita	Ovalitiana	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Result	Units	Qualifiers	KL	QCL	Wethod	Analysis Date / By
MAJOR IONS							
Calcium	721	mg/L		1		E200.7	03/01/17 00:52 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 00:52 / rlh
Potassium		mg/L		1		E200.7	03/01/17 00:52 / rlh
Sodium	957	mg/L	D	4		E200.7	03/01/17 00:52 / rlh
PHYSICAL PROPERTIES							
рН	6.5	s.u.	Н	0.1		A4500-H B	02/24/17 14:49 / pjw
Solids, Total Dissolved TDS @ 180 C	6000	mg/L	D	100		A2540 C	02/24/17 10:38 / rik
INORGANICS							
Chloride	1730	mg/L	D	6		E300.0	03/01/17 05:57 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 05:57 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 15:23 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 20:59 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 20:59 / mas
Barium		mg/L		0.01		E200.7	03/01/17 00:52 / rlh
Beryllium		mg/L		0.001		E200.8	03/01/17 20:59 / mas
Boron	0.55	mg/L		0.05		E200.7	03/01/17 00:52 / rlh
Cadmium	ND	mg/L		0.005		E200.8	03/01/17 20:59 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 20:59 / mas
Cobalt	ND	mg/L		0.02		E200.8	03/01/17 20:59 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 20:59 / mas
Lithium	0.45	mg/L	D	0.04		E200.7	03/01/17 00:52 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:36 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 20:59 / mas
Selenium		mg/L		0.01		E200.8	03/01/17 20:59 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 20:59 / mas
RADIONUCLIDES - TOTAL							
Radium 226	1.1	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.29	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	2.1	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military solution military

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-013

 Client Sample ID:
 SFLMW-2

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/22/17 17:09
DateReceived: 02/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	578	mg/L		1		E200.7	03/01/17 00:56 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 00:56 / rlh
Potassium		mg/L		1		E200.7	03/01/17 00:56 / rlh
Sodium	1460	mg/L	D	4		E200.7	03/01/17 00:56 / rlh
PHYSICAL PROPERTIES							
pH	6.8	s.u.	Н	0.1		A4500-H B	02/24/17 14:52 / pjw
Solids, Total Dissolved TDS @ 180 C	6630	mg/L	D	100		A2540 C	02/24/17 10:38 / rik
INORGANICS							
Chloride	2480	mg/L	D	6		E300.0	03/01/17 06:14 / mej
Sulfate	1740	mg/L	D	20		E300.0	03/01/17 06:14 / mej
Fluoride	0.4	mg/L		0.1		A4500-F C	02/27/17 15:25 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 21:02 / mas
Arsenic	ND	mg/L		0.01		E200.8	03/01/17 21:02 / mas
Barium	0.02	mg/L		0.01		E200.7	03/01/17 00:56 / rlh
Beryllium	ND	mg/L		0.001		E200.8	03/01/17 21:02 / mas
Boron	0.55	mg/L		0.05		E200.7	03/01/17 00:56 / rlh
Cadmium	ND	mg/L		0.005		E200.8	03/01/17 21:02 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 21:02 / mas
Cobalt	ND	mg/L		0.02		E200.8	03/01/17 21:02 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 21:02 / mas
Lithium	0.49	mg/L	D	0.04		E200.7	03/01/17 00:56 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:37 / jh
Molybdenum		mg/L		0.05		E200.8	03/01/17 21:02 / mas
Selenium	ND	mg/L		0.01		E200.8	03/01/17 21:02 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 21:02 / mas
RADIONUCLIDES - TOTAL							
Radium 226	2.6	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	4.5	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	7.1	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

4DO Minimum data table and

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-014

 Client Sample ID:
 EQBK-BJG-22217

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/22/17 17:55
DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	l luito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Result	Units	Qualifiers	KL .	QUL	Wethou	Alialysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	03/01/17 01:00 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 01:00 / rlh
Potassium	ND	mg/L		1		E200.7	03/01/17 01:00 / rlh
Sodium	ND	mg/L		1		E200.7	03/01/17 01:00 / rlh
PHYSICAL PROPERTIES							
pH	6.4	s.u.	Н	0.1		A4500-H B	02/24/17 14:54 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	02/24/17 10:39 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	03/01/17 06:30 / mej
Sulfate		mg/L		1		E300.0	03/01/17 06:30 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 15:45 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 21:05 / mas
Arsenic	ND	mg/L		0.01		E200.8	03/01/17 21:05 / mas
Barium	ND	mg/L		0.01		E200.7	03/01/17 01:00 / rlh
Beryllium	ND	mg/L		0.001		E200.7	03/01/17 01:00 / rlh
Boron	ND	mg/L		0.05		E200.7	03/01/17 01:00 / rlh
Cadmium	ND	mg/L		0.005		E200.7	03/01/17 01:00 / rlh
Chromium	ND	mg/L		0.01		E200.7	03/01/17 01:00 / rlh
Cobalt	ND	mg/L		0.02		E200.7	03/01/17 01:00 / rlh
Lead	ND	mg/L		0.01		E200.8	03/01/17 21:05 / mas
Lithium	ND	mg/L		0.01		E200.7	03/01/17 01:00 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:39 / jh
Molybdenum	ND	mg/L		0.05		E200.7	03/01/17 01:00 / rlh
Selenium	ND	mg/L		0.01		E200.8	03/01/17 21:05 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 21:05 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.12	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	0.13	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	0.2	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-015 Client Sample ID: SFLMW-5

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/23/17 09:02 DateReceived: 02/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL Metho	d	Analysis Date / By
MAJOR IONS							
Calcium	755	mg/L	D	2	E200.7	,	03/01/17 01:03 / rlh
Magnesium		mg/L		1	E200.7		03/01/17 01:03 / rlh
Potassium		mg/L		1	E200.7	,	03/01/17 01:03 / rlh
Sodium	1490	mg/L	D	8	E200.7	,	03/01/17 01:03 / rlh
PHYSICAL PROPERTIES							
pH	5.1	s.u.	Н	0.1	A4500	-Н В	02/24/17 14:57 / pjw
Solids, Total Dissolved TDS @ 180 C	7530	mg/L	D	100	A2540	С	02/24/17 10:39 / rik
INORGANICS							
Chloride	3020	mg/L	D	10	E300.0)	03/01/17 06:47 / mej
Sulfate	2120	mg/L	D	40	E300.0)	03/01/17 06:47 / mej
Fluoride	0.2	mg/L		0.1	A4500	-F C	02/27/17 15:56 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006	E200.8	3	03/01/17 21:19 / mas
Arsenic	ND	mg/L		0.01	E200.8	3	03/01/17 21:19 / mas
Barium	0.02	mg/L		0.01	E200.7	,	03/01/17 01:03 / rlh
Beryllium	0.010	mg/L		0.001	E200.8	3	03/01/17 21:19 / mas
Boron	2.98	mg/L	D	0.07	E200.7	,	03/01/17 01:03 / rlh
Cadmium	ND	mg/L		0.005	E200.8	3	03/01/17 21:19 / mas
Chromium	ND	mg/L		0.01	E200.8	3	03/01/17 21:19 / mas
Cobalt	0.05	mg/L		0.02	E200.8	3	03/01/17 21:19 / mas
Lead	ND	mg/L		0.01	E200.8	3	03/01/17 21:19 / mas
Lithium	0.72	mg/L	D	0.09	E200.7	,	03/01/17 01:03 / rlh
Mercury	ND	mg/L		0.001	E245.1		02/27/17 16:41 / jh
Molybdenum	ND	mg/L		0.05	E200.8	3	03/01/17 21:19 / mas
Selenium	ND	mg/L		0.01	E200.8	3	03/01/17 21:19 / mas
Thallium	ND	mg/L		0.002	E200.8	3	03/01/17 21:19 / mas
RADIONUCLIDES - TOTAL							
Radium 226	5.5	pCi/L			E903.0)	03/13/17 10:39 / eli-ca
Radium 226 precision (±)		pCi/L			E903.0)	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.19	pCi/L			E903.0)	03/13/17 10:39 / eli-ca
Radium 228	6.5	pCi/L			RA-05		03/07/17 15:12 / eli-ca
Radium 228 precision (±)	1.7	pCi/L			RA-05		03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L			RA-05		03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	11.9	pCi/L			A7500	-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	2.1	pCi/L			A7500	-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L			A7500	-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-016 Client Sample ID: SFLMW-3

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/23/17 10:16 DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Unito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Result	Units	Qualifiers	KL .	QUL	Wethou	Analysis Date / By
MAJOR IONS							
Calcium	628	mg/L		1		E200.7	03/01/17 01:07 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 01:07 / rlh
Potassium	49	mg/L		1		E200.7	03/01/17 01:07 / rlh
Sodium	815	mg/L	D	4		E200.7	03/01/17 01:07 / rlh
PHYSICAL PROPERTIES							
pH	3.8	s.u.	Н	0.1		A4500-H B	02/24/17 15:00 / pjw
Solids, Total Dissolved TDS @ 180 C	5440	mg/L	D	100		A2540 C	02/24/17 10:39 / rik
INORGANICS							
Chloride	1440	mg/L	D	6		E300.0	03/01/17 07:03 / mej
Sulfate	2280	mg/L	D	20		E300.0	03/01/17 07:03 / mej
Fluoride	0.6	mg/L		0.1		A4500-F C	02/27/17 16:04 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 21:22 / mas
Arsenic	ND	mg/L		0.01		E200.8	03/01/17 21:22 / mas
Barium	0.02	mg/L		0.01		E200.7	03/01/17 01:07 / rlh
Beryllium	0.040	mg/L		0.001		E200.8	03/01/17 21:22 / mas
Boron	2.54	mg/L		0.05		E200.7	03/01/17 01:07 / rlh
Cadmium	0.008	mg/L		0.005		E200.8	03/01/17 21:22 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 21:22 / mas
Cobalt	0.07	mg/L		0.02		E200.8	03/01/17 21:22 / mas
Lead	0.03	mg/L		0.01		E200.8	03/01/17 21:22 / mas
Lithium		mg/L	D	0.04		E200.7	03/01/17 01:07 / rlh
Mercury	0.002	mg/L		0.001		E245.1	02/28/17 13:09 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 21:22 / mas
Selenium		mg/L		0.01		E200.8	03/01/17 21:22 / mas
Thallium	0.006	mg/L		0.002		E200.8	03/01/17 21:22 / mas
RADIONUCLIDES - TOTAL							
Radium 226	3.1	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.67	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	4.5	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17021678-017

 Client Sample ID:
 EQBK-BJG-22317

Revised Date: 12/22/17
Report Date: 03/14/17
Collection Date: 02/23/17 11:20
DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	03/01/17 01:10 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 01:10 / rlh
Potassium		mg/L		1		E200.7	03/01/17 01:10 / rlh
Sodium		mg/L		1		E200.7	03/01/17 01:10 / rlh
PHYSICAL PROPERTIES							
рН	6.0	s.u.	Н	0.1		A4500-H B	02/24/17 15:02 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	02/24/17 10:39 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	03/01/17 08:26 / mej
Sulfate	ND	mg/L		1		E300.0	03/01/17 08:26 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	02/27/17 16:13 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 21:26 / mas
Arsenic	ND	mg/L		0.01		E200.8	03/01/17 21:26 / mas
Barium	ND	mg/L		0.01		E200.7	03/01/17 01:10 / rlh
Beryllium	ND	mg/L		0.001		E200.7	03/01/17 01:10 / rlh
Boron	ND	mg/L		0.05		E200.7	03/01/17 01:10 / rlh
Cadmium	ND	mg/L		0.005		E200.7	03/01/17 01:10 / rlh
Chromium	ND	mg/L		0.01		E200.7	03/01/17 01:10 / rlh
Cobalt	ND	mg/L		0.02		E200.7	03/01/17 01:10 / rlh
Lead	ND	mg/L		0.01		E200.8	03/01/17 21:26 / mas
Lithium	ND	mg/L		0.01		E200.7	03/01/17 01:10 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:45 / jh
Molybdenum	ND	mg/L		0.05		E200.7	03/01/17 01:10 / rlh
Selenium	ND	mg/L		0.01		E200.8	03/01/17 21:26 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 21:26 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.12	•	U			E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.12	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	0.46	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228	0.6	pCi/L	U			A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-018

Client Sample ID: DUP-1

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/21/17 DateReceived: 02/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	409	mg/L		1		E200.7	03/01/17 01:46 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 01:46 / rlh
Potassium		mg/L		1		E200.7	03/01/17 01:46 / rlh
Sodium		mg/L	D	4		E200.7	03/01/17 01:46 / rlh
PHYSICAL PROPERTIES							
pH	6.5	s.u.	Н	0.1		A4500-H B	02/24/17 15:05 / pjw
Solids, Total Dissolved TDS @ 180 C	3820	mg/L	D	40		A2540 C	02/24/17 10:39 / rik
INORGANICS							
Chloride	1170	mg/L	D	6		E300.0	03/01/17 08:42 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 08:42 / mej
Fluoride		mg/L	D	0.1		A4500-F C	02/27/17 16:17 / cjm
METALC TOTAL DECOVERABLE		3					,
METALS, TOTAL RECOVERABLE	ND	m a/l		0.006		E200 9	02/04/47 24:20 / mag
Antimony		mg/L		0.006 0.01		E200.8	03/01/17 21:29 / mas
Arsenic		mg/L				E200.8	03/01/17 21:29 / mas
Barium		mg/L		0.01		E200.7	03/01/17 01:46 / rlh
Beryllium		mg/L		0.001 0.05		E200.8 E200.7	03/01/17 21:29 / mas 03/01/17 01:46 / rlh
Boron Cadmium		mg/L				E200.7 E200.8	03/01/17 01:40 / IIII 03/01/17 21:29 / mas
Chromium		mg/L mg/L		0.005 0.01		E200.8	03/01/17 21:29 / mas
Cobalt		mg/L		0.01		E200.8	03/01/17 21:29 / mas
Lead		mg/L		0.02		E200.8	03/01/17 21:29 / mas
Lithium		mg/L	D	0.01		E200.6 E200.7	03/01/17 21:29 / Illas 03/01/17 01:46 / rlh
Mercury		mg/L	Ь	0.04		E245.1	02/27/17 16:46 / jh
Molybdenum		mg/L		0.05		E200.8	03/01/17 21:29 / mas
Selenium		mg/L		0.03		E200.8	03/01/17 21:29 / mas
Thallium		mg/L		0.002		E200.8	03/01/17 21:29 / mas
		9, =		0.002			00,0 1, 11 21120 , 11140
RADIONUCLIDES - TOTAL	4.0	C:/I				E002.0	00/40/47 40:00 / -1:
Radium 226		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17021678-019

Client Sample ID: DUP-2

Revised Date: 12/22/17 **Report Date:** 03/14/17 Collection Date: 02/22/17 DateReceived: 02/24/17

Matrix: Ground Water

Analyses	Result	l luita	Qualifiers	RL	MCL/ QCL	Method	Analysia Data / Dy
Analyses	Result	Units	Qualifiers	KL.	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	785	mg/L		1		E200.7	03/01/17 02:03 / rlh
Magnesium		mg/L		1		E200.7	03/01/17 02:03 / rlh
Potassium	56	mg/L		1		E200.7	03/01/17 02:03 / rlh
Sodium	1070	mg/L	D	4		E200.7	03/01/17 02:03 / rlh
PHYSICAL PROPERTIES							
рН	6.6	s.u.	Н	0.1		A4500-H B	02/24/17 15:07 / pjw
Solids, Total Dissolved TDS @ 180 C	6050	mg/L	D	100		A2540 C	02/24/17 10:40 / rik
INORGANICS							
Chloride	1730	mg/L	D	6		E300.0	03/01/17 08:59 / mej
Sulfate		mg/L	D	20		E300.0	03/01/17 08:59 / mej
Fluoride		mg/L		0.1		A4500-F C	02/27/17 16:20 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	03/01/17 21:32 / mas
Arsenic		mg/L		0.01		E200.8	03/01/17 21:32 / mas
Barium		mg/L		0.01		E200.7	03/01/17 02:03 / rlh
Beryllium		mg/L		0.001		E200.8	03/01/17 21:32 / mas
Boron	0.61	mg/L		0.05		E200.7	03/01/17 02:03 / rlh
Cadmium	ND	mg/L		0.005		E200.8	03/01/17 21:32 / mas
Chromium	ND	mg/L		0.01		E200.8	03/01/17 21:32 / mas
Cobalt	ND	mg/L		0.02		E200.8	03/01/17 21:32 / mas
Lead	ND	mg/L		0.01		E200.8	03/01/17 21:32 / mas
Lithium	0.53	mg/L	D	0.04		E200.7	03/01/17 02:03 / rlh
Mercury	ND	mg/L		0.001		E245.1	02/27/17 16:52 / jh
Molybdenum	ND	mg/L		0.05		E200.8	03/01/17 21:32 / mas
Selenium		mg/L		0.01		E200.8	03/01/17 21:32 / mas
Thallium	ND	mg/L		0.002		E200.8	03/01/17 21:32 / mas
RADIONUCLIDES - TOTAL							
Radium 226	0.99	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 226 MDC		pCi/L				E903.0	03/13/17 10:39 / eli-ca
Radium 228	1.2	pCi/L	U			RA-05	03/07/17 15:12 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 228 MDC		pCi/L				RA-05	03/07/17 15:12 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	03/13/17 11:18 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	03/13/17 11:18 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/22/17 **Report Date:** 03/14/17

Project: TMPA 6706150060

Work Order: B17021678

Qual	RPD RPDLimit	High Limit	Low Limit	%REC	RL	Units	unt Result	C	Analyte
170228	ytical Run: ICP203-B	Analy						E200.7	Method:
17 09:57	02/28			rd	ation Standa	ibration Verific	12 Continuing Cal	ICV	Lab ID:
		105	95	99	0.10	mg/L	2.49		Barium
		105	95	97	0.010	mg/L	1.21		Beryllium
		105	95	97	0.10	mg/L	2.42		Boron
		105	95	97	0.010	mg/L	2.41		Cadmium
		105	95	103	1.0	mg/L	25.7		Calcium
		105	95	96	0.050	mg/L	2.41		Chromium
		105	95	96	0.020	mg/L	2.40		Cobalt
		105	95	105	0.10	mg/L	1.31		Lithium
		105	95	103	1.0	mg/L	25.7	ı	Magnesium
		105	95	95	0.10	mg/L	2.38	m	Molybdenu
		105	95	103	1.0	mg/L	25.9		Potassium
		105	95	104	1.0	mg/L	26.0		Sodium
n: 10699	Batc							E200.7	Method:
17 22:01	02/28	3-B_170228A	Run: ICP20				12 Method Blank	MB-106999	Lab ID:
					0.0005	mg/L	ND		Barium
					0.0001	mg/L	ND		Beryllium
					0.003	mg/L	ND		Boron
					0.0010	mg/L	ND		Cadmium
					0.08	mg/L	ND		Calcium
					0.002	mg/L	ND		Chromium
					0.005	mg/L	ND		Cobalt
					0.004	mg/L	ND		Lithium
					0.01	mg/L	ND	า	Magnesium
					0.007	mg/L	ND	m	Molybdenu
					0.07	mg/L	ND		Potassium
					0.03	mg/L	0.04		Sodium
17 22:05	02/28	3-B_170228A	Run: ICP20			ntrol Sample	12 Laboratory Cor	LCS-106999	Lab ID:
		115	85	99	0.10	mg/L	0.494		Barium
		115	85	99	0.010	mg/L	0.249		Beryllium
		115	85	96	0.10	mg/L	0.479		Boron
		115	85	98	0.010	mg/L	0.245		Cadmium
		115	85	100	1.0	mg/L	25.1		Calcium
		115	85	95	0.050	mg/L	0.475		Chromium
		115	85	98	0.050	mg/L	0.492		Cobalt
		115	85	100	0.10	mg/L	0.499		Lithium
		115	85	99	1.0	mg/L	24.8	ı	Magnesium
		115	85	94	0.10	mg/L	0.469	m	Molybdenu
		115	85	99	1.0	mg/L	24.8		Potassium
		115	85	98	1.0	mg/L	24.6		Sodium
17 23:24	02/28	3-B_170228A	Run: ICP20			Spike	12 Sample Matrix	B17021674-011BMS3	Lab ID:
0¬	32/20	130	70	100	0.050	mg/L	0.510		Barium
		130	70	100	0.0010	mg/L	0.251		Beryllium

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060

Revised Date: 12/22/17 **Report Date:** 03/14/17

Work Order: B17021678

Analyte		Count Result	t Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7								Batcl	h: 106999
Lab ID:	B17021674-011BMS	3 12 Sample Mat	rix Spike			Run: ICP20	3-B_170228A		02/28/	17 23:24
Boron		1.85	5 mg/L	0.050	111	70	130			
Cadmium		0.242	2 mg/L	0.0050	97	70	130			
Calcium		330) mg/L	1.0		70	130			Α
Chromium	ı	0.470) mg/L	0.010	94	70	130			
Cobalt		0.488	3 mg/L	0.026	98	70	130			
Lithium		0.618	3 mg/L	0.10	102	70	130			
Magnesiur	m	295	5 mg/L	1.0		70	130			Α
Molybdenu	um	0.468	3 mg/L	0.036	94	70	130			
Potassium	1	38.7	mg/L	1.0	103	70	130			
Sodium		364	l mg/L	2.1		70	130			Α
Lab ID:	B17021674-011BMSI	D 12 Sample Mat	rix Spike Du	ıplicate		Run: ICP20	3-B_170228A		02/28/	17 23:27
Barium		0.492	2 mg/L	0.050	97	70	130	3.5	20	
Beryllium		0.245	5 mg/L	0.0010	98	70	130	2.4	20	
Boron		1.79	mg/L	0.050	99	70	130	3.1	20	
Cadmium		0.243	3 mg/L	0.0050	97	70	130	0.4	20	
Calcium		324	l mg/L	1.0		70	130	1.7	20	Α
Chromium	ı	0.475	5 mg/L	0.010	95	70	130	1.0	20	
Cobalt		0.488	B mg/L	0.026	98	70	130	0.0	20	
Lithium		0.596	6 mg/L	0.10	98	70	130	3.6	20	
Magnesiur	m	291	l mg/L	1.0		70	130	1.3	20	Α
Molybdenu	um	0.447	mg/L	0.036	89	70	130	4.5	20	
Potassium	1	37.8	3 mg/L	1.0	100	70	130	2.4	20	
Sodium		356	6 mg/L	2.1		70	130	2.0	20	Α
Method:	E200.7								Batcl	h: 107000
Lab ID:	MB-107000	12 Method Blar	nk			Run: ICP20	3-B_170228A		03/01/	17 00:10
Barium		NE) mg/L	0.0005						
Beryllium		NE) mg/L	0.0001						
Boron		NE) mg/L	0.003						
Cadmium		NE) mg/L	0.0010						
Calcium		NE) mg/L	0.08						
Chromium	l	NE) mg/L	0.002						
Cobalt		NE) mg/L	0.005						
Lithium		0.005	5 mg/L	0.004						
Magnesiur	m	NE) mg/L	0.01						
Molybdenu	um	NE) mg/L	0.007						
Potassium	1	0.08	-	0.07						
Sodium		0.04	l mg/L	0.03						
Lab ID:	LCS-107000	12 Laboratory 0	Control Sam	ple		Run: ICP20	3-B_170228A		03/01/	17 00:14
Barium		0.471	l mg/L	0.10	94	85	115			
Beryllium		0.238	3 mg/L	0.010	95	85	115			
Boron		0.458	3 mg/L	0.10	92	85	115			
Cadmium		0.239	mg/L	0.010	96	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/22/17 **Report Date:** 03/14/17

Project: TMPA 6706150060

Work Order: B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batc	h: 107000
Lab ID:	LCS-107000	12 Lat	oratory Co	ntrol Sample			Run: ICP20	3-B_170228A		03/01/	/17 00:14
Calcium			24.4	mg/L	1.0	97	85	115			
Chromium			0.456	mg/L	0.050	91	85	115			
Cobalt			0.477	mg/L	0.050	95	85	115			
Lithium			0.471	mg/L	0.10	93	85	115			
Magnesium	า		24.3	mg/L	1.0	97	85	115			
Molybdenu	m		0.452	mg/L	0.10	90	85	115			
Potassium			23.9	mg/L	1.0	95	85	115			
Sodium			23.9	mg/L	1.0	96	85	115			
Lab ID:	B17021678-008BMS3	12 Saı	mple Matrix	Spike			Run: ICP20	03-B_170228A		03/01/	/17 00:28
Barium			0.536	mg/L	0.050	101	70	130			
Beryllium			0.255	mg/L	0.0014	102	70	130			
Boron			1.84	mg/L	0.050	122	70	130			
Cadmium			0.250	mg/L	0.0099	100	70	130			
Calcium			428	mg/L	1.0		70	130			Α
Chromium			0.495	mg/L	0.020	99	70	130			
Cobalt			0.500	mg/L	0.052	100	70	130			
Lithium			1.42	mg/L	0.10	109	70	130			
Magnesium	ı		108	mg/L	1.0	110	70	130			
Molybdenu	m		0.467	mg/L	0.071	93	70	130			
Potassium			79.4	mg/L	1.0	107	70	130			
Sodium			735	mg/L	4.2		70	130			Α
Lab ID:	B17021678-008BMSI) 12 Sai	mple Matrix	Spike Duplicat	e		Run: ICP20	03-B_170228A		03/01/	/17 00:38
Barium			0.513	mg/L	0.050	96	70	130	4.3	20	
Beryllium			0.247	mg/L	0.0014	99	70	130	3.5	20	
Boron			1.74	mg/L	0.050	100	70	130	6.0	20	
Cadmium			0.254	mg/L	0.0099	101	70	130	1.6	20	
Calcium			419	mg/L	1.0		70	130	2.1	20	Α
Chromium			0.481	mg/L	0.020	96	70	130	3.0	20	
Cobalt			0.487	mg/L	0.052	97	70	130	2.7	20	
Lithium			1.36	mg/L	0.10	98	70	130	3.9	20	
Magnesium	n		105	mg/L	1.0	100	70	130	2.3	20	
Molybdenu	m		0.437	mg/L	0.071	87	70	130	6.6	20	
Potassium			76.8	mg/L	1.0	97	70	130	3.3	20	
Sodium			706	mg/L	4.2		70	130	4.1	20	Α
Lab ID:	B17021678-018BMS3	3 12 Sai	mple Matrix	Spike			Run: ICP20	3-B_170228A		03/01/	/17 01:56
Barium			0.527	mg/L	0.050	99	70	130			
Beryllium			0.254	mg/L	0.0014	102	70	130			
Boron			1.83	mg/L	0.050	105	70	130			
Cadmium			0.248	mg/L	0.0099	99	70	130			
Calcium			433	mg/L	1.0		70	130			Α
Chromium			0.515	mg/L	0.020	103	70	130			
Cobalt			0.491	mg/L	0.052	98	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Revised Date: 12/22/17



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 03/14/17 Project: TMPA 6706150060 Work Order: B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	h: 107000
Lab ID:	B17021678-018BMS3	12 Sar	mple Matrix	Spike			Run: ICP20	3-B_170228A		03/01/	17 01:56
Lithium			1.44	mg/L	0.10	99	70	130			
Magnesiun	n		109	mg/L	1.0	98	70	130			
Molybdenu	ım		0.513	mg/L	0.071	103	70	130			
Potassium			79.8	mg/L	1.0	96	70	130			
Sodium			742	mg/L	4.2		70	130			Α
Lab ID:	B17021678-018BMSE) 12 Sar	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170228A		03/01/	17 02:00
Barium			0.529	mg/L	0.050	100	70	130	0.4	20	
Beryllium			0.253	mg/L	0.0014	101	70	130	0.5	20	
Boron			1.80	mg/L	0.050	100	70	130	1.5	20	
Cadmium			0.246	mg/L	0.0099	98	70	130	1.1	20	
Calcium			432	mg/L	1.0		70	130	0.2	20	Α
Chromium			0.506	mg/L	0.020	101	70	130	1.9	20	
Cobalt			0.497	mg/L	0.052	99	70	130	1.1	20	
Lithium			1.44	mg/L	0.10	99	70	130	0.1	20	
Magnesiun	n		109	mg/L	1.0	95	70	130	0.6	20	
Molybdenu	ım		0.526	mg/L	0.071	105	70	130	2.6	20	
Potassium			80.0	mg/L	1.0	97	70	130	0.3	20	
Sodium			743	mg/L	4.2		70	130	0.2	20	Α

Qualifiers:

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Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060

Revised Date: 12/22/17 **Report Date:** 03/14/17

Work Order: B17021678

Analyte		Count R	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS206-B	_170228A
Lab ID:	QCS	10 Initial C	alibratio	n Verificat	ion Standard					02/28	/17 09:40
Antimony		0.	.0512	mg/L	0.050	102	90	110			
Arsenic		0.	.0521	mg/L	0.0050	104	90	110			
Beryllium		0.	.0256	mg/L	0.0010	102	90	110			
Cadmium		0.	.0257	mg/L	0.0010	103	90	110			
Chromium		0.	.0511	mg/L	0.010	102	90	110			
Cobalt		0.	.0534	mg/L	0.010	107	90	110			
Lead		0.	.0504	mg/L	0.010	101	90	110			
Molybdenu	ım	0.	.0507	mg/L	0.0050	101	90	110			
Selenium		0.	.0514	mg/L	0.0050	103	90	110			
Thallium		0.	.0509	mg/L	0.10	102	90	110			
Method:	E200.8									Batc	h: 106999
Lab ID:	MB-106999	10 Method	Blank				Run: ICPM	S206-B_170228A	<u>.</u>	03/01	/17 01:14
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt		0.0	00005	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	ım	0.0	00006	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	7E-06						
Lab ID:	LCS-106999	10 Laborat	tory Con	itrol Sampl	e		Run: ICPM	S206-B_170228A		03/01/	/17 02:45
Antimony		(0.477	mg/L	0.0050	95	85	115			
Arsenic		(0.477	mg/L	0.0010	95	85	115			
Beryllium		(0.235	mg/L	0.0010	94	85	115			
Cadmium		(0.247	mg/L	0.0010	99	85	115			
Chromium		(0.478	mg/L	0.0010	96	85	115			
Cobalt		(0.488	mg/L	0.0010	98	85	115			
Lead		(0.471	mg/L	0.0010	94	85	115			
Molybdenu	ım		0.468	mg/L	0.0050	94	85	115			
Selenium		(0.467	mg/L	0.0050	93	85	115			
Thallium			0.496	mg/L	0.0010	99	85	115			
Lab ID:	B17021674-001BMS3	10 Sample	Matrix	Spike			Run: ICPM	S206-B_170228A		03/01/	/17 02:48
Antimony		(0.487	mg/L	0.0010	97	70	130			
Arsenic		(0.492	mg/L	0.0010	99	70	130			
Beryllium		(0.242	mg/L	0.0010	97	70	130			
Cadmium		(0.248	mg/L	0.0010	99	70	130			
Chromium		(0.483	mg/L	0.0050	97	70	130			
Cobalt		(0.493	mg/L	0.0050	99	70	130			
Lead		(0.466	mg/L	0.0010	93	70	130			
Molybdenu	ım	(0.481	mg/L	0.0010	96	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Revised Date: 12/22/17



QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/14/17Project:TMPA 6706150060Work Order:B17021678

Result Units RL %REC Low Limit High Limit **RPD RPDLimit Analyte** Count Qual Method: E200.8 Batch: 106999 Lab ID: B17021674-001BMS3 10 Sample Matrix Spike Run: ICPMS206-B_170228A 03/01/17 02:48 0.470 Selenium 0.0018 94 70 130 Thallium 0.467 0.00050 70 130 mg/L 93 Lab ID: B17021674-001BMSD 10 Sample Matrix Spike Duplicate Run: ICPMS206-B 170228A 03/01/17 02:51 Antimony 0.510 0.0010 102 4.5 20 mg/L 70 130 0.516 70 Arsenic mg/L 0.0010 103 130 4.8 20 Beryllium 0.247 mg/L 0.0010 99 70 130 2.1 20 Cadmium 0.254 mg/L 0.0010 102 70 130 2.4 20 Chromium 0.504 mg/L 0.0050 101 70 130 4.3 20 Cobalt 0.511 mg/L 0.0050 102 70 130 3.6 20 Lead 0.478 0.0010 70 130 2.5 20 mg/L 96 Molybdenum 0.501 mg/L 0.0010 100 70 130 4.1 20 70 Selenium 0.497 mg/L 0.0018 99 130 5.5 20 Thallium 0.477 mg/L 0.00050 95 70 130 2.3 20

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/22/17 **Report Date:** 03/14/17

Project: TMPA 6706150060 **Work Order**: B17021678

Method: Lab ID:								High Limit	RPD RPDLimit	Qual
Lab ID.	E200.8							Analytical	Run: ICPMS206-B	_170301A
Lab ID:	QCS	10 Initial Ca	libratior	n Verificatio	on Standard				03/01/	17 20:22
Antimony		0.0)518	mg/L	0.050	104	90	110		
Arsenic		0.0)513	mg/L	0.0050	103	90	110		
Beryllium		0.0	261	mg/L	0.0010	104	90	110		
Cadmium		0.0	251	mg/L	0.0010	101	90	110		
Chromium		0.0)525	mg/L	0.010	105	90	110		
Cobalt		0.0)534	mg/L	0.010	107	90	110		
Lead		0.0)496	mg/L	0.010	99	90	110		
Molybdenum	n	0.0	502	mg/L	0.0050	100	90	110		
Selenium		0.0	503	mg/L	0.0050	101	90	110		
Thallium		0.0)506	mg/L	0.10	101	90	110		
Method:	E200.8								Batcl	h: 107000
Lab ID:	MB-107000	10 Method E	Blank				Run: ICPMS	S206-B_170301A	03/01/	17 20:42
Antimony			ND	mg/L	0.00004			_		
Arsenic			ND	mg/L	0.0002					
Beryllium			ND	mg/L	0.00008					
Cadmium			ND	mg/L	0.00003					
Chromium			ND	mg/L	0.0001					
Cobalt			ND	mg/L	0.00002					
Lead			ND	mg/L	0.00003					
Molybdenum	n		ND	mg/L	0.00003					
Selenium			ND	mg/L	0.0004					
Thallium			ND	mg/L	7E-06					
Lab ID:	LCS-107000	10 Laborato	ry Cont	rol Sample	:		Run: ICPMS	S206-B_170301A	03/01/	17 22:13
Antimony		0.	.526	mg/L	0.0050	105	85	115		
Arsenic		0.	.501	mg/L	0.0010	100	85	115		
Beryllium		0.	.254	mg/L	0.0010	101	85	115		
Cadmium		0.	.253	mg/L	0.0010	101	85	115		
Chromium		0.	.486	mg/L	0.0010	97	85	115		
Cobalt		0.	.540	mg/L	0.0010	108	85	115		
Lead		0.	.494	mg/L	0.0010	99	85	115		
Molybdenum	n	0.	.522	mg/L	0.0050	104	85	115		
Selenium		0.	.485	mg/L	0.0050	97	85	115		
Thallium		0.	.495	mg/L	0.0010	99	85	115		
Lab ID:	B17021678-008BMS3	10 Sample I	Matrix S	Spike			Run: ICPMS	S206-B_170301A	03/01/	17 22:16
Antimony		0.	.545	mg/L	0.0010	109	70	130		
Arsenic		0.	.520	mg/L	0.0010	103	70	130		
Beryllium		0.	.263	mg/L	0.0010	105	70	130		
Cadmium		0.	.248	mg/L	0.0010	99	70	130		
Chromium		0.	.502	mg/L	0.0050	101	70	130		
Cobalt		0.	.540	mg/L	0.0050	108	70	130		
Lead		0.	.537	mg/L	0.0010	107	70	130		
Molybdenum	n	0.	.533	mg/L	0.0010	106	70	130		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Revised Date: 12/22/17



QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/14/17Project:TMPA 6706150060Work Order:B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 107000
Lab ID:	B17021678-008BMS	3 10 Sam	ple Matrix	Spike			Run: ICPM	S206-B_170301A		03/01/	17 22:16
Selenium			0.496	mg/L	0.0018	99	70	130			
Thallium			0.407	mg/L	0.00050	81	70	130			
Lab ID:	B17021678-008BMSI	D 10 Sam	ple Matrix	Spike Du	plicate		Run: ICPM	S206-B_170301A		03/01/	17 22:20
Antimony			0.538	mg/L	0.0010	108	70	130	1.2	20	
Arsenic			0.536	mg/L	0.0010	106	70	130	3.0	20	
Beryllium			0.267	mg/L	0.0010	107	70	130	1.3	20	
Cadmium			0.263	mg/L	0.0010	105	70	130	5.8	20	
Chromium			0.508	mg/L	0.0050	102	70	130	1.0	20	
Cobalt			0.541	mg/L	0.0050	108	70	130	0.3	20	
Lead			0.540	mg/L	0.0010	108	70	130	0.4	20	
Molybdenu	ım		0.528	mg/L	0.0010	105	70	130	1.0	20	
Selenium			0.513	mg/L	0.0018	103	70	130	3.5	20	
Thallium			0.429	mg/L	0.00050	86	70	130	5.3	20	



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 03/14/17

Revised Date: 12/22/17

Project: TMPA 6706150060

Work Order: B17021678

Analyte		Count Re	sult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B	_170227A
Lab ID:	ICV	Initial Ca	alibratio	on Verificati	on Standard					02/27	/17 13:22
Mercury		0.00	0216	mg/L	0.00010	108	90	110			
Method:	E245.1									Batc	h: 107018
Lab ID:	MB-107018	Method	Blank				Run: HGCV	/202-B_170227A		02/27	/17 15:23
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-107018	Laborato	ory Co	ntrol Sample	Э		Run: HGCV	/202-B_170227A		02/27	/17 15:25
Mercury		0.00)213	mg/L	0.00010	106	85	115			
Lab ID:	B17021678-007BMS	Sample	Matrix	Spike			Run: HGCV	/202-B_170227A		02/27	/17 16:14
Mercury		0.00)197	mg/L	0.00010	99	70	130			
Lab ID:	B17021678-007BMS	D Sample	Matrix	Spike Dupli	icate		Run: HGCV	/202-B_170227A		02/27	/17 16:16
Mercury		0.00)197	mg/L	0.00010	99	70	130	0.1	30	
Method:	E245.1									Batc	h: 107019
Lab ID:	MB-107019	Method	Blank				Run: HGCV	/202-B_170227A		02/27	/17 16:17
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-107019	Laborato	ory Coi	ntrol Sample	Э		Run: HGCV	/202-B_170227A		02/27	/17 16:19
Mercury		0.00)215	mg/L	0.00010	107	85	115			
Lab ID:	B17021678-008BMS	Sample	Matrix	Spike			Run: HGCV	/202-B_170227A		02/27	/17 16:23
Mercury		0.00)212	mg/L	0.00010	106	70	130			
Lab ID:	B17021678-008BMS	D Sample	Matrix	Spike Dupli	icate		Run: HGCV	/202-B_170227A		02/27	/17 16:25
Mercury		0.00)213	mg/L	0.00010	106	70	130	0.3	30	
Lab ID:	B17021723-001BMS	Sample	Matrix	Spike			Run: HGCV	/202-B_170227A		02/27	/17 17:03
Mercury		0.00)222	mg/L	0.00010	110	70	130			
Lab ID:	B17021723-001BMS	D Sample	Matrix	Spike Dupli	icate		Run: HGCV	/202-B_170227A		02/27	/17 17:05
Mercury		0.00)220	mg/L	0.00010	110	70	130	0.7	30	



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/22/17 **Report Date:** 03/14/17

Project: TMPA 6706150060

Work Order: B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	cal Run: I	HGCV202-B_	170228B
Lab ID:	ICV	Ini	tial Calibratio	on Verificat	ion Standard					02/28/	17 12:57
Mercury			0.00192	mg/L	0.00010	96	90	110			
Method:	E245.1									Batch	n: 107054
Lab ID:	MB-107054	Me	thod Blank				Run: HGCV	/202-B_170228I	В	02/28/	17 13:02
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-107054	La	boratory Cor	ntrol Samp	le		Run: HGCV	/202-B_170228I	В	02/28/	17 13:04
Mercury			0.00196	mg/L	0.00010	98	85	115			
Lab ID:	B17021678-016BMS	Sa	mple Matrix	Spike			Run: HGCV	/202-B_170228I	В	02/28/	17 13:13
Mercury			0.00374	mg/L	0.00010	77	70	130			
Lab ID:	B17021678-016BMS	D Sa	mple Matrix	Spike Dup	licate		Run: HGCV	/202-B_170228E	В	02/28/	17 13:15
Mercury			0.00369	mg/L	0.00010	75	70	130	1.3	30	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/09/17Project:TMPA 6706150060Work Order:B17021678

Analyte	Count R	esult l	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch	n: 106994
Lab ID: LCS-106994	Labora	tory Contro	ol Sample			Run: BAL#	SD-15_170224E		02/24/	17 10:35
Solids, Total Dissolved TDS @	180 C	985 r	mg/L	10	97	90	110			
Lab ID: B17021678-010A D	UP Sample	Duplicate	:			Run: BAL #	SD-15_170224E		02/24/	17 10:38
Solids, Total Dissolved TDS @	180 C	8390 r	mg/L	97				0.2	5	
Lab ID: MB-106994	Method	l Blank				Run: BAL #	SD-15_170224E		02/24/	17 22:23
Solids, Total Dissolved TDS @	180 C	ND r	mg/L	4						
Method: A2540 C									Batch	n: 107073
Lab ID: MB-107073	Method	l Blank				Run: BAL #	SD-15_170228B		02/28/	17 08:35
Solids, Total Dissolved TDS @	180 C	ND r	mg/L	4						
Lab ID: LCS-107073	Labora	tory Contro	ol Sample			Run: BAL #	SD-15_170228B		02/28/	17 08:35
Solids, Total Dissolved TDS @	180 C	1000 r	mg/L	10	100	90	110			
Lab ID: B17021776-003A D	UP Sample	Duplicate	•			Run: BAL#	SD-15_170228B		02/28/	17 08:35
Solids, Total Dissolved TDS @	180 C	17000 r	mg/L	140				7.0	5	R
Lab ID: B17021678-002A D	UP Sample	e Duplicate	•			Run: BAL#	SD-15_170228B		02/28/	17 08:38
Solids, Total Dissolved TDS @	180 C	1330 r	mg/L	20				1.4	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/09/17Project:TMPA 6706150060Work Order:B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH	_170227B
Lab ID:	ICV	Initi	al Calibrati	on Verification St	andard					02/27	/17 14:28
Fluoride			1.00	mg/L	0.10	100	90	110			
Method:	A4500-F C									Batch	R275522
Lab ID:	MBLK	Met	thod Blank				Run: MAN-	TECH_170227B		02/27	/17 14:23
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory Fo	tified Blank			Run: MAN-	TECH_170227B		02/27	/17 14:25
Fluoride			1.02	mg/L	0.10	102	90	110			
Lab ID:	B17021678-004AMS	Sar	mple Matrix	Spike			Run: MAN-	TECH_170227B		02/27	/17 14:34
Fluoride			1.06	mg/L	0.10	99	80	120			
Lab ID:	B17021678-004AMS	D Sar	mple Matrix	Spike Duplicate			Run: MAN-	TECH_170227B		02/27	/17 14:37
Fluoride			1.12	mg/L	0.10	105	80	120	5.5	10	
Lab ID:	B17021678-014AMS	Sar	mple Matrix	Spike			Run: MAN-	TECH_170227B		02/27	/17 15:48
Fluoride			1.03	mg/L	0.10	103	80	120			
Lab ID:	B17021678-014AMS	D Sar	mple Matrix	Spike Duplicate			Run: MAN-	TECH_170227B		02/27	/17 15:50
Fluoride			1.04	mg/L	0.10	104	80	120	1.0	10	
Lab ID:	B17021720-005AMS	Sar	mple Matrix	Spike			Run: MAN-	TECH_170227B		02/27	/17 17:49
Fluoride			1.27	mg/L	0.10	105	80	120			
Lab ID:	B17021720-005AMS	D Sar	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170227B		02/27	/17 17:51
Fluoride			1.28	mg/L	0.10	106	80	120	8.0	10	
Method:	A4500-F C							Analytic	al Run:	MAN-TECH	_170228A
Lab ID:	ICV	Initi	al Calibrati	on Verification St	andard					02/28	/17 09:55
Fluoride			1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C									Batch	R275550
Lab ID:	MBLK	Met	thod Blank				Run: MAN-	TECH_170228A		02/28	/17 09:50
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory Fo	tified Blank			Run: MAN-	TECH_170228A		02/28	/17 09:52
Fluoride			1.00	mg/L	0.10	100	90	110			
Lab ID:	B17021674-007AMS	Sar	mple Matrix	Spike			Run: MAN-	TECH_170228A		02/28	/17 10:45
Fluoride			1.37	mg/L	0.10	96	80	120			
Lab ID:	B17021674-007AMS	D Sar	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170228A		02/28	/17 10:48
Fluoride			1.39	mg/L	0.10	98	80	120	1.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/09/17Project:TMPA 6706150060Work Order:B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: Pl	HSC _101-B_	_170224A
Lab ID:	pH 8	Initi	al Calibratio	n Verifica	tion Standard					02/24/	17 09:00
рН			7.98	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R275368
Lab ID:	B17021678-001ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17022	24A	02/24/	17 14:18
рН			5.38	s.u.	0.10				0.0	3	
Lab ID:	B17021678-011ADUF	S ar	nple Duplica	ate			Run: PHSC	_101-B_17022	24A	02/24/	17 14:47
рН			4.05	s.u.	0.10				0.0	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:03/09/17Project:TMPA 6706150060Work Order:B17021678

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC N	IETROHM 1	_170228A
Lab ID:	ICV	2 Initi	al Calibration	on Verification Sta	ndard					02/28	/17 11:43
Chloride			2.17	mg/L	1.0	97	90	110			
Sulfate			9.05	mg/L	1.0	101	90	110			
Method:	E300.0									Batch:	R275568
Lab ID:	ICB	2 Met	thod Blank				Run: IC ME	TROHM 1_17	0228A	02/28	/17 12:00
Chloride			ND	mg/L	0.03						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 1_17	0228A	02/28	/17 12:16
Chloride			9.90	mg/L	1.0	99	90	110			
Sulfate			30.2	mg/L	1.0	101	90	110			
Lab ID:	B17021678-006AMS	2 Sar	nple Matrix	Spike			Run: IC ME	TROHM 1_17	0228A	03/01/	/17 03:29
Chloride			2560	mg/L	6.1	102	90	110			
Sulfate			6070	mg/L	18	106	90	110			
Lab ID:	B17021678-006AMSI	D 2 Sar	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_17	0228A	03/01	/17 04:18
Chloride			2540	mg/L	6.1	100	90	110	8.0	20	
Sulfate			6000	mg/L	18	103	90	110	1.2	20	
Lab ID:	B17021678-016AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 1_170	0228A	03/01	/17 07:20
Chloride			2450	mg/L	6.1	100	90	110			
Sulfate			5430	mg/L	18	105	90	110			
Lab ID:	B17021678-016AMSI	D 2 Sar	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0228A	03/01	/17 08:09
Chloride			2430	mg/L	6.1	99	90	110	0.5	20	
Sulfate			5420	mg/L	18	105	90	110	0.2	20	
Lab ID:	B17021712-001AMS	2 Sar	nple Matrix	Spike			Run: IC ME	TROHM 1_170	0228A	03/01	/17 10:05
Chloride			554	mg/L	3.0	106	90	110			
Sulfate			3930	mg/L	9.1	99	90	110			
Lab ID:	B17021712-001AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0228A	03/01	/17 10:22
Chloride			556	mg/L	3.0	106	90	110	0.4	20	
Sulfate			3950	mg/L	9.1	100	90	110	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:03/13/17Project:TMPA 6706150060Work Order:B17021678

Analyte	Result Units	RL %REG	Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0				Batch: RA226-8422
Lab ID: LCS-RA226-8422	Laboratory Control Sa	ample	Run: G5000W_170228C	03/13/17 09:06
Radium 226	9.3 pCi/L	88	80 120	
Lab ID: MB-RA226-8422	Method Blank		Run: G5000W_170228C	03/13/17 09:06
Radium 226	0.2 pCi/L			
Radium 226 precision (±)	0.1 pCi/L			
Radium 226 MDC	0.2 pCi/L			
Lab ID: B17021678-001CMS	Sample Matrix Spike		Run: G5000W_170228C	03/13/17 09:06
Radium 226	21 pCi/L	96	70 130	
Lab ID: B17021678-001CMSD	Sample Matrix Spike	Duplicate	Run: G5000W_170228C	03/13/17 09:06
Radium 226	19 pCi/L	90	70 130	6.8 20

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:03/13/17Project:TMPA 6706150060Work Order:B17021678

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA	228-5442
Lab ID: LCS-228-RA226-8422	Laboratory Cor	ntrol Sample			Run: TENN	NELEC-3_170228	8C	03/07	/17 13:37
Radium 228	9.6	pCi/L		93	80	120			
Lab ID: MB-RA226-8422	Method Blank				Run: TENN	NELEC-3_170228	8C	03/07	/17 13:37
Radium 228	0.6	pCi/L							U
Radium 228 precision (±)	0.9	pCi/L							
Radium 228 MDC	1	pCi/L							
Lab ID: B17021678-011CMS	Sample Matrix	Spike			Run: TENN	NELEC-3_170228	8C	03/07	/17 13:37
Radium 228	24	pCi/L		109	70	130			
Lab ID: B17021678-011CMSD	Sample Matrix	Spike Duplicate			Run: TENN	NELEC-3_170228	8C	03/07	/17 13:37
Radium 228	22	pCi/L		100	70	130	8.4	20	

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Tabitha Edwards

B17021678

Date Received: 2/24/2017

Reviewed by:	BL2000\cindy		Re	eceived by: lab
Reviewed Date:	2/28/2017		Cai	rrier name: Return-UPS NDA
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present 🗹
Chain of custody present?		Yes 🔽	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🔽	No 🗌	
Chain of custody agrees with	sample labels?	Yes	No 🗹	
Samples in proper container/	/bottle?	Yes 🔽	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are co such as pH, DO, Res Cl, Su	onsidered field parameters	Yes ✓	No 🗌	
Temp Blank received in all sh	nipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted 🔽
Water - pH acceptable upon	receipt?	Yes 🗹	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 1.1°C, shipping container 2 was 1.3°C, shipping container 3 was 0.6°C, shipping container 4 was 1.0°C, shipping container 5 was 0.4°C and shipping container 6 was 0.7°C.

One 2 Liter Plastic Nitric preserved container was received with no identification. Only one 2 Liter Plastic Nitric preserved container was received for sample SFLMW-1 all other samples had two. Labeled the container with no identification as SFLMW-1 per Cindy Rohrer, Energy Laboratories Branch Manager.



Chain of Custody & Analytical Request Record

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Contact Phone

Email

Chain of Custody & Analytical Request Record

J Q

Comments **Analysis Requested** □ EDD/EDT (contact laboratory) □ Other Report Information (if different than Account Information) □Email □ LEVEL IV □ NELAC Special Report/Formats: Secupany/Name Mailing Address Matrix Codes City, State, Zip Contact Phone Email K mail Mailing Address 3755 S. (apital of TX Hwy, #375 **Bottle Order** greg. Seifert @amectus com Sheeler Sheeler 78704 Account Information (Billing information, 512-715-0360 Foster Austin, Company/Name Amec Sign City, State, Zip Purchase Order

MUST be contacted prior to All tumaround times are standard unless marked as RUSH sample submittal for charges and scheduling -See Instructions Page Energy Laboratories See Attached V - Vegetation B - Bioassay DW - Drinking Water S - Soils/ Solids W- Water O - Other A- Air **2**□ Sampler Phone 512-241-332 ☐ Unprocessed ore (NOT ground or refined)* EPA/State Compliance XYes 6706150060 MINING CLIENTS, please indicate sample type. Project Name, PWSID, Permit, etc. 7MPA Sampler Name Brian Chieselman □ Byproduct 11 (e)2 material Project Information Sample Origin State

50 010 Lateratory Use Only かべ ELLAB ID 10-86 MBOUTE Matrix (See Codes \exists Number of Containers 1 0902 1550 709 1755 9/0/ 1427 1130 Time Collection 123/17 11/60 43/17 2/41/17 Date EQBK-BJG-22217 Eabk-BJG-223/7 Sample Identification (Name, Location, Interval, etc.) SFL MW-3 SFL MW-5 SFL MW-2 SFL MW-6 SFLMW-4 DUP-2 DUP-1

	Alla	confy)
Signature	Say The A sa	Receipt Number (cash/check only)
Date/Time	Date/Time	1 1
Received by (print)	Received by Labdratory (print)	ONLY Payment Type CC Cash Check
alm		ABORATORY USE C
Signature High	Signature	ipt Temp Temp Blank
2/33/17@1410	Date/Time	Intact Receipt
		Custody Seals
Custody Relinquished by (print) Record MUST Brian Giese man	be signed Relinquished by (print)	Cooler ID(s)
Custody Record MUST	be signed	Shipped By

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Trust our People. Trust our Data.



BOTTLE ORDER 109818

SHIFF	SHIPPED 10: Amec - Austin	- AUSTII	1					
Contact:	Contact: Brian Gieselman						Order Created by: Shari Endv	
	3755 South Capital of Texas Highway Suite 375	al of Texa	s Highway				Shipped From: Billings, MT	
	Austin TX 78704						Ship Date: 2/13/2017	
Phone:							VIA: Ground	
Project:	Project: CCRR						Quote Used: 3997	
Bot	Bottle Size/Type	Bottles Per Samp	sottles Per Samp Method	Tests	Critical Hold Time	Preservative	Notes	Num of Same

Num of Samp

Appendix III & IV (20 Sets)	20 S	ets)				
1 Liter Plastic	1	A2540 C				-
		A4500-H B pH		0.24 hrs		_
		E300.0				· · ·
		A4500-F C Fluoride	Fluoride			
250 mL Plastic		E200.7_8			HN03	-
		E245.1	Mercury, Total Recoverable			
2 Liter Plastic	2	2 E903.0	Radium 226, Total		HN03	-

We strongly suggest that the samples are	shipped the same day as they are collected.	Sheets	a skin irritant.
NaOH - Sodium Hydroxide	H3PO4 - Phosphoric Acid	EnergyLab.com ->Services -> MSDS Sheets	Acids and Sodium Hydroxide. Zinc Acetate is a skin irritant.
HNO3 - Nitric Acid H2SO4 - Sulfuric Acid	HCI - Hydrochloric Acid	Material Safety Data Sheets(MSDS) Available @ En	Corrosive Chemicals: Nitric, Suffuric, Phosphoric, Hydrochloric Ac
HNO3 - Nitric Acid	ZnAc - Zinc Acetate HCI - Hydrochloric Acid	Material Safety Data She	Corrosive Chemicals: Nitric, Su

A7500-RA Radium 226 + Radium 228

Radium 228, Total

RA-05

1 of 2

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17050467 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 9 samples for Texas Municipal Power Agency on 5/4/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17050467-001	SFL MW-3	05/02/17 9:3	5 05/04/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17050467-002	SFL MW-4	05/02/17 10:	38 05/04/17	Ground Water	Same As Above
B17050467-003	MNW-18	05/02/17 12:	38 05/04/17	Ground Water	Same As Above
B17050467-006	MNW-15	05/02/17 17:	51 05/04/17	Ground Water	Same As Above
B17050467-008	EQBK-SCM-50217	05/02/17 18:4	45 05/04/17	Ground Water	Same As Above
B17050467-009	DUP-1	05/02/17 0:0	0 05/04/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT **800.735.4489** • Casper, WY **888.235.0515** Gillette, WY **866.686.7175** • Helena, MT **877.472.0711**

Revised Date: 12/21/17

Report Date: 06/07/17

 Project:
 TMPA 6706150060

 Work Order:
 B17050467

 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L)

Antimony 0.05 0.006
Cadmium 0.01 0.005
Thallium 0.01 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050467-001 Client Sample ID: SFL MW-3

Revised Date: 12/21/17 **Report Date:** 06/07/17 Collection Date: 05/02/17 09:35 DateReceived: 05/04/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesuit	Ullits	Qualifiers	IXE.	QUL	Wiethou	Allalysis Date / By
MAJOR IONS							
Calcium	590	mg/L		1		E200.7	05/09/17 05:33 / rlh
Magnesium	113	mg/L		1		E200.7	05/09/17 05:33 / rlh
Potassium	47	mg/L		1		E200.7	05/09/17 05:33 / rlh
Sodium	772	mg/L	D	4		E200.7	05/09/17 05:33 / rlh
PHYSICAL PROPERTIES							
pH	3.8	s.u.	Н	0.1		A4500-H B	05/04/17 19:20 / pjw
Solids, Total Dissolved TDS @ 180 C	5130	mg/L	D	100		A2540 C	05/05/17 09:07 / rik
INORGANICS							
Chloride	1390	mg/L	D	6		E300.0	05/07/17 02:28 / cjm
Sulfate		mg/L	D	20		E300.0	05/07/17 02:28 / cjm
Fluoride	0.6	mg/L		0.1		A4500-F C	05/08/17 17:44 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/09/17 03:59 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/09/17 03:59 / jpv
Barium		mg/L		0.01		E200.8	05/09/17 03:59 / jpv
Beryllium	0.034	mg/L		0.001		E200.8	05/09/17 03:59 / jpv
Boron	2.49	mg/L		0.05		E200.7	05/09/17 05:33 / rlh
Cadmium	0.008	mg/L		0.005		E200.8	05/09/17 03:59 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/09/17 03:59 / jpv
Cobalt	0.07	mg/L		0.02		E200.8	05/09/17 03:59 / jpv
Lead	0.02	mg/L		0.01		E200.8	05/09/17 03:59 / jpv
Lithium	0.29	mg/L	D	0.04		E200.7	05/09/17 05:33 / rlh
Mercury	0.002	mg/L		0.001		E245.1	05/08/17 15:46 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/09/17 03:59 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/09/17 03:59 / jpv
Thallium	0.006	mg/L		0.002		E200.8	05/09/17 03:59 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.5	pCi/L				E903.0	05/30/17 11:21 / eli-ca
Radium 226 precision (±)	0.34	pCi/L				E903.0	05/30/17 11:21 / eli-ca
Radium 226 MDC	0.11	pCi/L				E903.0	05/30/17 11:21 / eli-ca
Radium 228	5.4	pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 226 + Radium 228	6.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050467-002 Client Sample ID: SFL MW-4

Revised Date: 12/21/17 **Report Date:** 06/07/17 Collection Date: 05/02/17 10:38 DateReceived: 05/04/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	735	mg/L		1		E200.7	05/09/17 06:08 / rlh
Magnesium		mg/L		1		E200.7	05/09/17 06:08 / rlh
Potassium		mg/L		1		E200.7	05/09/17 06:08 / rlh
Sodium		mg/L	D	4		E200.7	05/09/17 06:08 / rlh
DUVEICAL DEODEDTIES		Ü					
PHYSICAL PROPERTIES	6.5	s.u.	Н	0.1		A 4500 LI D	05/04/17 10:22 / piw
pH Solids, Total Dissolved TDS @ 180 C			п D	90		A4500-H B A2540 C	05/04/17 19:23 / pjw 05/05/17 09:07 / rik
Solids, Total Dissolved TDS (@ 160 C	3700	mg/L	Ь	90		A2540 C	05/05/17 09.07 / 11K
INORGANICS							
Chloride	1730	mg/L	D	6		E300.0	05/07/17 02:48 / cjm
Sulfate	2280	mg/L	D	20		E300.0	05/07/17 02:48 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	05/08/17 17:57 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/09/17 04:02 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/11/17 19:56 / jpv
Barium		mg/L		0.01		E200.7	05/09/17 06:08 / rlh
Beryllium		mg/L		0.001		E200.8	05/09/17 04:02 / jpv
Boron	0.58	mg/L		0.05		E200.7	05/09/17 06:08 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/09/17 04:02 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/09/17 04:02 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/09/17 04:02 / jpv
Lead	ND	mg/L		0.01		E200.8	05/09/17 04:02 / jpv
Lithium	0.42	mg/L	D	0.04		E200.7	05/09/17 06:08 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/05/17 15:01 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/09/17 04:02 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/09/17 04:02 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/09/17 04:02 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.47	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 precision (±)	0.12	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 MDC	0.11	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 228	1.1	pCi/L	U			RA-05	05/22/17 14:28 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 226 + Radium 228	1.5	pCi/L	U			A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Revised Date: 12/21/17

Report Date: 06/07/17

Collection Date: 05/02/17 12:38

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050467-003

DateReceived: 05/04/17 Client Sample ID: MNW-18 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	201	mg/L		1		E200.7	05/09/17 06:11 / rlh
Magnesium		mg/L		1		E200.7	05/09/17 06:11 / rlh
Potassium		mg/L		1		E200.7	05/09/17 06:11 / rlh
Sodium		mg/L	D	2		E200.7	05/09/17 06:11 / rlh
Codium	703	IIIg/L	D	2		L200.7	03/09/17 00.1171111
PHYSICAL PROPERTIES							
pH	7.5	s.u.	Н	0.1		A4500-H B	05/04/17 19:25 / pjw
Solids, Total Dissolved TDS @ 180 C	3050	mg/L	D	40		A2540 C	05/05/17 09:07 / rik
INORGANICS							
Chloride	547	mg/L	D	3		E300.0	05/07/17 03:07 / cjm
Sulfate	1470	mg/L	D	9		E300.0	05/07/17 03:07 / cjm
Fluoride	0.2	mg/L		0.1		A4500-F C	05/08/17 18:05 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/09/17 04:05 / jpv
Arsenic		mg/L		0.01		E200.8	05/11/17 19:59 / jpv
Barium		mg/L		0.01		E200.7	05/09/17 06:11 / rlh
Beryllium		mg/L		0.001		E200.7	05/09/17 06:11 / rlh
Boron	0.45	mg/L		0.05		E200.7	05/09/17 06:11 / rlh
Cadmium		mg/L		0.005		E200.8	05/09/17 04:05 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/09/17 04:05 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/09/17 04:05 / jpv
Lead	ND	mg/L		0.01		E200.8	05/09/17 04:05 / jpv
Lithium	0.39	mg/L	D	0.02		E200.7	05/09/17 06:11 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/05/17 15:03 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/09/17 06:11 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/09/17 04:05 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/09/17 04:05 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.2	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 MDC		pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 228		pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 228 MDC		pCi/L				RA-05	05/22/17 14:28 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Revised Date: 12/21/17

Report Date: 06/07/17

Collection Date: 05/02/17 17:51

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA 6706150060 Project: Lab ID: B17050467-006

DateReceived: 05/04/17 Client Sample ID: MNW-15 Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesuit	Onits	Quanners			Metriod	Analysis Date / By
MAJOR IONS							
Calcium	280	mg/L		1		E200.7	05/09/17 06:50 / rlh
Magnesium	53	mg/L		1		E200.7	05/09/17 06:50 / rlh
Potassium	27	mg/L		1		E200.7	05/09/17 06:50 / rlh
Sodium	459	mg/L	D	2		E200.7	05/09/17 06:50 / rlh
PHYSICAL PROPERTIES							
pH	3.7	s.u.	Н	0.1		A4500-H B	05/04/17 19:33 / pjw
Solids, Total Dissolved TDS @ 180 C	2540	mg/L	D	40		A2540 C	05/05/17 10:08 / rik
INORGANICS							
Chloride	730	mg/L	D	3		E300.0	05/07/17 04:06 / cjm
Sulfate		mg/L	D	9		E300.0	05/07/17 04:06 / cjm
Fluoride		mg/L	_	0.1		A4500-F C	05/08/17 18:16 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/09/17 07:38 / jpv
Arsenic		mg/L		0.01		E200.8	05/11/17 20:29 / jpv
Barium		mg/L		0.01		E200.7	05/09/17 06:50 / rlh
Beryllium	0.077			0.001		E200.7	05/09/17 06:50 / rlh
Boron		mg/L		0.05		E200.7	05/09/17 06:50 / rlh
Cadmium	0.093	mg/L		0.005		E200.7	05/09/17 06:50 / rlh
Chromium	ND	mg/L		0.01		E200.8	05/09/17 07:38 / jpv
Cobalt	0.27	mg/L		0.02		E200.8	05/09/17 07:38 / jpv
Lead	ND	mg/L		0.01		E200.8	05/09/17 07:38 / jpv
Lithium	0.09	mg/L	D	0.02		E200.7	05/09/17 06:50 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/05/17 15:12 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/09/17 06:50 / rlh
Selenium		mg/L		0.01		E200.8	05/09/17 07:38 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/09/17 07:38 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.15	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 precision (±)	0.09	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 MDC	0.12	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 228	0.55	pCi/L	U			RA-05	05/22/17 16:03 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	05/22/17 16:03 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	05/22/17 16:03 / eli-ca
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA 6706150060 Project: Lab ID: B17050467-008 Client Sample ID: EQBK-SCM-50217

Revised Date: 12/21/17 **Report Date:** 06/07/17 Collection Date: 05/02/17 18:45 DateReceived: 05/04/17

Matrix: Ground Water

Analyses	Result	Unito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Result	Ullits	Qualifiers	NL .	QUL.	Wethou	Allalysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	05/09/17 06:57 / rlh
Magnesium		mg/L		1		E200.7	05/09/17 06:57 / rlh
Potassium	ND	mg/L		1		E200.7	05/09/17 06:57 / rlh
Sodium	ND	mg/L		1		E200.7	05/09/17 06:57 / rlh
PHYSICAL PROPERTIES							
pH	5.6	s.u.	Н	0.1		A4500-H B	05/04/17 19:38 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	05/05/17 11:16 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	05/07/17 05:24 / cjm
Sulfate		mg/L		1		E300.0	05/07/17 05:24 / cjm
Fluoride		mg/L		0.1		A4500-F C	05/08/17 18:28 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/09/17 07:45 / jpv
Arsenic		mg/L		0.01		E200.8	05/09/17 07:45 / jpv
Barium		mg/L		0.01		E200.7	05/09/17 06:57 / rlh
Beryllium		mg/L		0.001		E200.7	05/09/17 06:57 / rlh
Boron	ND	mg/L		0.05		E200.7	05/09/17 06:57 / rlh
Cadmium	ND	mg/L		0.005		E200.7	05/09/17 06:57 / rlh
Chromium	ND	mg/L		0.01		E200.7	05/09/17 06:57 / rlh
Cobalt	ND	mg/L		0.02		E200.7	05/09/17 06:57 / rlh
Lead	ND	mg/L		0.01		E200.8	05/09/17 07:45 / jpv
Lithium	ND	mg/L		0.01		E200.7	05/09/17 06:57 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/05/17 15:16 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/09/17 06:57 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/09/17 07:45 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/09/17 07:45 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.08	pCi/L	U			E903.0	05/30/17 13:01 / eli-ca
Radium 226 precision (±)	0.08	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 226 MDC	0.12	pCi/L				E903.0	05/30/17 13:01 / eli-ca
Radium 228	2.5	pCi/L				RA-05	05/22/17 16:03 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/22/17 16:03 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	05/22/17 16:03 / eli-ca
Radium 226 + Radium 228	2.6	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 **Lab ID:** B17050467-009

Client Sample ID: DUP-1

Revised Date: 12/21/17 Report Date: 06/07/17 Collection Date: 05/02/17 DateReceived: 05/04/17

MCL/ QCL **Analyses** Result Units Qualifiers RL Method Analysis Date / By **MAJOR IONS** Calcium 852 mg/L 1 E200.7 05/09/17 07:01 / rlh Magnesium 129 mg/L 1 E200.7 05/09/17 07:01 / rlh Potassium 59 mg/L 1 E200.7 05/09/17 07:01 / rlh Sodium 1160 mg/L D 4 E200.7 05/09/17 07:01 / rlh **PHYSICAL PROPERTIES** 6.5 s.u. Н 0.1 A4500-H B 05/04/17 19:44 / pjw рΗ Solids, Total Dissolved TDS @ 180 C D 05/05/17 11:16 / rik 6240 mg/L 90 A2540 C **INORGANICS** 1680 mg/L D 6 E300.0 05/07/17 06:22 / cjm Chloride Sulfate 2200 mg/L D 20 E300.0 05/07/17 06:22 / cjm A4500-F C 05/08/17 18:31 / bas Fluoride ND mg/L 0.1 **METALS, TOTAL RECOVERABLE** Antimony ND mg/L 0.006 E200.8 05/09/17 07:48 / jpv Arsenic ND mg/L 0.01 E200.8 05/11/17 20:33 / jpv Barium 0.03 mg/L 0.01 E200.7 05/09/17 07:01 / rlh Beryllium ND mg/L 0.001 E200.8 05/09/17 07:48 / jpv 0.65 mg/L 0.05 E200.7 05/09/17 07:01 / rlh Boron 0.005 Cadmium ND mg/L F2008 05/09/17 07:48 / ipv Chromium ND mg/L 0.01 F200 8 05/09/17 07:48 / jpv Cobalt ND mg/L 0.02 E200.8 05/09/17 07:48 / jpv Lead ND mg/L 0.01 E200.8 05/09/17 07:48 / ipv D 0.04 Lithium 0.48 mg/L F200.7 05/09/17 07:01 / rlh Mercury ND mg/L 0.001 F245 1 05/05/17 15:18 / mas Molybdenum ND mg/L 0.05 E200.8 05/09/17 07:48 / jpv Selenium ND mg/L 0.01 E200.8 05/09/17 07:48 / jpv Thallium mg/L 0.002 E200.8 05/09/17 07:48 / jpv ND **RADIONUCLIDES - TOTAL** 0.33 pCi/L E903.0 Radium 226 05/30/17 13:01 / eli-ca Radium 226 precision (±) 0.11 pCi/L E903.0 05/30/17 13:01 / eli-ca Radium 226 MDC 0.11 pCi/L E903.0 05/30/17 13:01 / eli-ca Radium 228 0.59 pCi/L U **RA-05** 05/22/17 16:03 / eli-ca Radium 228 precision (±) 1.1 pCi/L **RA-05** 05/22/17 16:03 / eli-ca Radium 228 MDC 1.8 pCi/L **RA-05** 05/22/17 16:03 / eli-ca Radium 226 + Radium 228 0.9 pCi/L U A7500-RA 05/31/17 11:00 / eli-ca Radium 226 + Radium 228 precision (±) 1.1 pCi/L A7500-RA 05/31/17 11:00 / eli-ca Radium 226 + Radium 228 MDC 1.8 pCi/L A7500-RA 05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit.

Definitions: OCL - Quality control limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050467

Analyte	Count Res	ult Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch	n: 109212
Lab ID: LCS-109212	Laborator	y Control Sample			Run: BAL#	SD-15_170505B		05/05/	17 09:04
Solids, Total Dissolved TDS	@ 180 C	996 mg/L	10	100	90	110			
Lab ID: B17050467-005A	A DUP Sample D	uplicate			Run: BAL #	SD-15_170505B		05/05/	17 09:05
Solids, Total Dissolved TDS	@ 180 C 82	210 mg/L	93				0.3	5	D
Lab ID: MB-109212	Method B	lank			Run: BAL #	SD-15_170505B		05/08/	17 08:58
Solids, Total Dissolved TDS	@ 180 C	ND mg/L	4						
Method: A2540 C								Batch	n: 109229
Lab ID: LCS-109229	Laborator	y Control Sample			Run: BAL #	SD-15_170505C		05/05/	17 11:15
Solids, Total Dissolved TDS	@ 180 C	991 mg/L	10	100	90	110			
Lab ID: B17050467-007A	A DUP Sample D	uplicate			Run: BAL #	SD-15_170505C		05/05/	17 11:15
Solids, Total Dissolved TDS	@ 180 C	379 mg/L	10				1.6	5	
Lab ID: MB-109229	Method B	lank			Run: BAL #	SD-15_170505C		05/08/	17 09:07
Solids, Total Dissolved TDS	@ 180 C	ND mg/L	4						

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 05/24/17Project:TMPA 6706150060Work Order: B17050467

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	_170508B
Lab ID:	ICV	Initi	al Calibratio	on Verification Sta	ndard					05/08/	17 16:59
Fluoride			1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C									Batch:	R279515
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170508B		05/08/	17 16:54
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_170508B		05/08/	17 16:56
Fluoride			0.980	mg/L	0.10	98	90	110			
Lab ID:	B17050467-002AMS	Sar	nple Matrix	Spike			Run: MAN-	TECH_170508B		05/08/	17 17:59
Fluoride			1.03	mg/L	0.10	95	80	120			
Lab ID:	B17050467-002AMS	D Sar	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170508B		05/08/	17 18:02
Fluoride			1.04	mg/L	0.10	96	80	120	1.0	10	
Lab ID:	B17050507-003AMS	Sar	nple Matrix	Spike			Run: MAN-	TECH_170508B		05/08/	17 18:53
Fluoride			2.57	mg/L	0.10	100	80	120			
Lab ID:	B17050507-003AMS	D Sar	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170508B		05/08/	17 18:56
Fluoride			2.56	mg/L	0.10	99	80	120	0.4	10	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 05/24/17Project:TMPA 6706150060Work Order: B17050467

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD R	PDLimit	Qual
Method:	A4500-H B							Analytica	al Run: PHS	C_101-B_	170504A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	tion Standard					05/04/	17 08:42
рН			7.98	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Con	tinuing Cali	bration Ve	erification Standa	rd				05/04/	17 19:02
рН			7.03	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R279245
Lab ID:	B17050467-008ADUF	P Sam	ple Duplica	ate			Run: PHSC	_101-B_17050)4A	05/04/	17 19:41
рН			5.54	s.u.	0.10				1.6	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 05/24/17Project:TMPA 6706150060Work Order: B17050467

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	1ETROHM 2	_170505A
Lab ID:	ICV	2 Init	al Calibratio	n Verification Sta	ındard					05/05/	17 16:40
Chloride			2.15	mg/L	1.0	96	90	110			
Sulfate			8.94	mg/L	1.0	99	90	110			
Method:	E300.0									Batch:	R279451
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_17	0505A	05/05/	17 16:59
Chloride			0.009	mg/L	0.002						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lab	oratory Fort	ified Blank			Run: IC ME	TROHM 2_17	0505A	05/05/	17 17:19
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			31.1	mg/L	1.0	104	90	110			
Lab ID:	B17050448-005AMS	2 Sar	nple Matrix	Spike			Run: IC ME	TROHM 2_17	0505A	05/07/	17 01:10
Chloride			55.4	mg/L	1.0	108	90	110			
Sulfate			338	mg/L	1.0	101	90	110			
Lab ID:	B17050448-005AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0505A	05/07/	17 01:29
Chloride			55.5	mg/L	1.0	109	90	110	0.3	20	
Sulfate			339	mg/L	1.0	102	90	110	0.5	20	
Lab ID:	B17050467-008AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 2_17	0505A	05/07/	17 05:43
Chloride			11.0	mg/L	1.0	110	90	110			
Sulfate			33.2	mg/L	1.0	110	90	110			
Lab ID:	B17050467-008AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0505A	05/07/	17 06:03
Chloride			11.1	mg/L	1.0	110	90	110	0.2	20	
Sulfate			33.2	mg/L	1.0	110	90	110	0.1	20	

Qualifiers:

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/07/17

Project: TMPA 6706150060

Work Order: B17050467

Qual	RPDLimit	RPD	High Limit	Low Limit	%REC	RL	Units	Result	Count		Analyte
170508/	n: ICP203-B	ytical Rur	Analy							E200.7	Method:
/17 11:07	05/08/				⁻ d	ation Standa	bration Verific	ntinuing Cali	12 Co	ICV	Lab ID:
			105	95	101	0.10	mg/L	2.53			Barium
			105	95	100	0.010	mg/L	1.25			Beryllium
			105	95	100	0.10	mg/L	2.50			Boron
			105	95	100	0.010	mg/L	2.49			Cadmium
			105	95	102	1.0	mg/L	25.5			Calcium
			105	95	99	0.050	mg/L	2.48			Chromium
			105	95	99	0.020	mg/L	2.48			Cobalt
			105	95	103	0.10	mg/L	1.29			Lithium
			105	95	103	1.0	mg/L	25.8		า	Magnesium
			105	95	101	0.10	mg/L	2.52		m	Molybdenu
			105	95	102	1.0	mg/L	25.4			Potassium
			105	95	102	1.0	mg/L	25.4			Sodium
h: 109200	Batcl									E200.7	Method:
/17 04:03	05/09/		3-B_170508A	Run: ICP20				thod Blank	9 Me	MB-109200	Lab ID:
						0.0005	mg/L	ND			Barium
						0.0001	mg/L	ND			Beryllium
						0.003	mg/L	ND			Boron
						0.08	mg/L	ND			Calcium
						0.004	mg/L	ND			Lithium
						0.01	mg/L	ND		า	Magnesium
						0.007	mg/L	ND		m	Molybdenu
						0.07	mg/L	ND			Potassium
						0.03	mg/L	0.03			Sodium
/17 04:06	05/09/		3-B_170508A	Run: ICP20			ntrol Sample	boratory Cor	9 La	LCS-109200	Lab ID:
			115	85	109	0.10	mg/L	0.546			Barium
			115	85	111	0.010	mg/L	0.277			Beryllium
			115	85	107	0.10	mg/L	0.533			Boron
			115	85	110	1.0	mg/L	27.4			Calcium
			115	85	111	0.10	mg/L	0.553			Lithium
			115	85	111	1.0	mg/L	27.9		า	Magnesium
			115	85	105	0.10	mg/L	0.524		m	Molybdenu
			115	85	110	1.0	mg/L	27.4			Potassium
			115	85	112	1.0	mg/L	28.0			Sodium
/17 05:16	05/09/		3-B_170508A	Run: ICP20			Spike	mple Matrix	DMS3 9 Sa	B17050448-005DMS	Lab ID:
			130	70	90	0.050	mg/L	0.462			Barium
			130	70	93	0.0010	mg/L	0.235			Beryllium
			130	70	90	0.050	mg/L	0.448			Boron
			130	70	95	1.0	mg/L	48.9			Calcium
			130	70	95	0.10	mg/L	0.497			Lithium
			130	70	98	1.0	mg/L	30.2		า	Magnesium
							-				-
			130	70	91	0.0071	mg/L	0.457		m	Molybdenu

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/07/17

Project: TMPA 6706150060

Work Order: B17050467

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batc	h: 10920
Lab ID:	B17050448-005DMS3	9 Sa	mple Matrix	Spike			Run: ICP20	3-B_170508A		05/09	/17 05:16
Sodium			43.8	mg/L	1.0	92	70	130			
Lab ID:	B17050448-005DMSE	9 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170508A		05/09	/17 05:19
Barium			0.445	mg/L	0.050	86	70	130	3.8	20	
Beryllium			0.225	mg/L	0.0010	89	70	130	4.3	20	
Boron			0.434	mg/L	0.050	87	70	130	3.3	20	
Calcium			46.7	mg/L	1.0	86	70	130	4.5	20	
Lithium			0.478	mg/L	0.10	91	70	130	3.9	20	
Magnesiun	n		28.9	mg/L	1.0	93	70	130	4.3	20	
Molybdenu	ım		0.427	mg/L	0.0071	85	70	130	6.7	20	
Potassium			28.0	mg/L	1.0	91	70	130	4.2	20	
Sodium			42.3	mg/L	1.0	86	70	130	3.6	20	
Method:	E200.7									Batc	h: 10920
Lab ID:	MB-109201	12 Me	thod Blank				Run: ICP20	3-B_170508A		05/09	/17 06:15
Barium			ND	mg/L	0.0005						
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.0010						
Calcium			ND	mg/L	0.08						
Chromium			ND	mg/L	0.002						
Cobalt			ND	mg/L	0.005						
Lithium			ND	mg/L	0.004						
Magnesiun	n		ND	mg/L	0.01						
Molybdenu	ım		ND	mg/L	0.007						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-109201	12 La	ooratory Co	ntrol Sample			Run: ICP20	3-B_170508A		05/09	/17 06:19
Barium			0.497	mg/L	0.10	99	85	115			
Beryllium			0.250	mg/L	0.010	100	85	115			
Boron			0.467	mg/L	0.10	93	85	115			
Cadmium			0.245	mg/L	0.010	98	85	115			
Calcium			24.7	mg/L	1.0	99	85	115			
Chromium			0.509	mg/L	0.050	102	85	115			
Cobalt			0.487	mg/L	0.050	97	85	115			
Lithium			0.488	mg/L	0.10	98	85	115			
Magnesiun	n		25.1	mg/L	1.0	101	85	115			
Molybdenu	ım		0.489	mg/L	0.10	98	85	115			
Potassium			24.5	mg/L	1.0	98	85	115			
Sodium			25.0	mg/L	1.0	100	85	115			
	B17050467-005BMS3	12 Sa	mple Matrix	Spike			Run: ICP20	3-B_170508A		05/09	/17 06:36
Lab ID:											
Lab ID: Barium			0.566	mg/L	0.050	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/21/17 **Report Date:** 06/07/17

Work Order: B17050467

Project: TMPA 6706150060

Analyte		Count R	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 109201
Lab ID:	B17050467-005BMS3	3 12 Sample	e Matrix	Spike			Run: ICP20	3-B_170508A		05/09/	/17 06:36
Boron			2.17	mg/L	0.068	130	70	130			
Cadmium			0.241	mg/L	0.020	96	70	130			
Calcium			887	mg/L	1.6		70	130			Α
Chromium			0.619	mg/L	0.041	124	70	130			
Cobalt			0.566	mg/L	0.10	113	70	130			
Lithium			1.77	mg/L	0.10	123	70	130			
Magnesiur	n		150	mg/L	1.5		70	130			Α
Molybdenu	ım		0.588	mg/L	0.14	118	70	130			
Potassium	1		97.6	mg/L	1.4	156	70	130			S
Sodium			2100	mg/L	8.4		70	130			Α
Lab ID:	B17050467-005BMSE	12 Sample	e Matrix	Spike Duplicate	e		Run: ICP20	3-B_170508A		05/09/	/17 06:40
Barium			0.535	mg/L	0.050	102	70	130	5.6	20	
Beryllium			0.251	mg/L	0.0029	100	70	130	5.7	20	
Boron			2.09	mg/L	0.068	114	70	130	3.8	20	
Cadmium			0.231	mg/L	0.020	92	70	130	4.4	20	
Calcium			864	mg/L	1.6		70	130	2.7	20	Α
Chromium			0.574	mg/L	0.041	115	70	130	7.6	20	
Cobalt			0.533	mg/L	0.10	107	70	130	6.1	20	
Lithium			1.72	mg/L	0.10	112	70	130	3.1	20	
Magnesiur	n		145	mg/L	1.5		70	130	3.6	20	Α
Molybdenu	ım		0.557	mg/L	0.14	111	70	130	5.5	20	
Potassium	1		83.1	mg/L	1.4	98	70	130	16	20	
Sodium			2010	mg/L	8.4		70	130	4.3	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/07/17

Project: TMPA 6706150060

Work Order: B17050467

Analyte		Count Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimi	t Qual
Method:	E200.8						Analytica	Run: ICPMS206-	B_170508A
Lab ID:	QCS	11 Initial Calibra	tion Verifica	ation Standard				05/0	08/17 23:52
Antimony		0.0478	mg/L	0.050	96	90	110		
Arsenic		0.0497	mg/L	0.0050	99	90	110		
Barium		0.0482	mg/L	0.10	96	90	110		
Beryllium		0.0246	mg/L	0.0010	98	90	110		
Cadmium		0.0272	mg/L	0.0010	109	90	110		
Chromium		0.0514	mg/L	0.010	103	90	110		
Cobalt		0.0509	mg/L	0.010	102	90	110		
Lead		0.0488	mg/L	0.010	98	90	110		
Molybdenu	m	0.0478	mg/L	0.0050	96	90	110		
Selenium		0.0498	mg/L	0.0050	100	90	110		
Thallium		0.0487	mg/L	0.10	97	90	110		
Method:	E200.8							Ва	tch: 109200
Lab ID:	MB-109200	11 Method Blan	k			Run: ICPM	S206-B_170508A	05/0	08/17 13:32
Antimony		0.0003	mg/L	0.00004			_		
Arsenic		ND	mg/L	0.0002					
Barium		ND	mg/L	0.00005					
Beryllium		0.0002	mg/L	0.00008					
Cadmium		ND	mg/L	0.00003					
Chromium		ND	mg/L	0.0001					
Cobalt		ND	mg/L	0.00002					
Lead		ND	mg/L	0.00003					
Molybdenu	m	ND	mg/L	0.00003					
Selenium		ND	mg/L	0.0004					
Thallium		0.00006	mg/L	7E-06					
Lab ID:	LCS-109200	11 Laboratory C	ontrol Sam	ple		Run: ICPM	S206-B_170508A	05/0	08/17 14:46
Antimony		0.507	mg/L	0.0010	101	85	115		
Arsenic		0.509	mg/L	0.0010	102	85	115		
Barium		0.510	mg/L	0.050	102	85	115		
Beryllium		0.247	mg/L	0.0010	99	85	115		
Cadmium		0.248	mg/L	0.0010	99	85	115		
Chromium		0.498	mg/L	0.0050	100	85	115		
Cobalt		0.516	mg/L	0.0050	103	85	115		
Lead		0.512	mg/L	0.0010	102	85	115		
Molybdenu	m	0.495	mg/L	0.0010	99	85	115		
Selenium		0.508	mg/L	0.0010	102	85	115		
Thallium		0.508	mg/L	0.00050	102	85	115		
Lab ID:	B17050448-005DMS3	11 Sample Matr	ix Spike			Run: ICPM	S206-B_170508A	05/0	9/17 03:25
Antimony		0.505	•	0.0010	101	70	130		
Arsenic		0.514	mg/L	0.0010	98	70	130		
Barium		0.515		0.050	100	70	130		
Beryllium		0.222		0.0010	88	70	130		
Cadmium		0.259	mg/L	0.0010	103	70	130		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Revised Date: 12/21/17

QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/07/17Project:TMPA 6706150060Work Order:B17050467

ınt	yte C	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
	nod: E200.8								Batc	h: 109200
1 5	D: B17050448-005DMS3	mple Matrix	Spike			Run: ICPM	S206-B_170508A		05/09	/17 03:25
	mium	0.483	mg/L	0.0050	97	70	130			
	alt	0.487	mg/L	0.0050	96	70	130			
	I	0.493	mg/L	0.0010	98	70	130			
	bdenum	0.486	mg/L	0.0010	97	70	130			
	nium	0.494	mg/L	0.0010	99	70	130			
	lium	0.493	mg/L	0.00050	97	70	130			
1 5	D: B17050448-005DMSD	mple Matrix	Spike Du	plicate		Run: ICPM	S206-B_170508A		05/09	/17 03:28
	mony	0.502	mg/L	0.0010	100	70	130	0.5	20	
	nic	0.508	mg/L	0.0010	97	70	130	1.1	20	
	ım	0.512	mg/L	0.050	100	70	130	0.6	20	
	llium	0.221	mg/L	0.0010	87	70	130	0.5	20	
	mium	0.263	mg/L	0.0010	105	70	130	1.7	20	
	mium	0.491	mg/L	0.0050	98	70	130	1.6	20	
	alt	0.479	mg/L	0.0050	95	70	130	1.6	20	
	I	0.485	mg/L	0.0010	97	70	130	1.6	20	
	bdenum	0.488	mg/L	0.0010	97	70	130	0.3	20	
	nium	0.486	mg/L	0.0010	97	70	130	1.5	20	
	lium	0.485	mg/L	0.00050	96	70	130	1.5	20	
	nod: E200.8								Batc	h: 109201
0 1	D: MB-109201	thod Blank				Run: ICPM	S206-B_170508A		05/09	/17 07:01
	mony	ND	mg/L	0.00004						
	nic	ND	mg/L	0.0002						
	llium	ND	mg/L	0.00008						
	mium	ND	mg/L	0.00003						
	mium	ND	mg/L	0.0001						
	alt	ND	mg/L	0.00002						
	I	ND	mg/L	0.00003						
	bdenum	ND	mg/L	0.00003						
	nium	ND	mg/L	0.0004						
	lium	7E-06	mg/L	7E-06						
0 μ	D: LCS-109201	oratory Cor	ntrol Sam	ple		Run: ICPM	S206-B_170508A		05/09	/17 07:11
	mony	0.510	mg/L	0.0010	102	85	115			
	nic	0.515	mg/L	0.0010	103	85	115			
	llium	0.231	mg/L	0.0010	92	85	115			
	mium	0.257	mg/L	0.0010	103	85	115			
	mium	0.472	mg/L	0.0050	94	85	115			
	alt	0.473	mg/L	0.0050	95	85	115			
	I	0.490	mg/L	0.0010	98	85	115			
	bdenum	0.487	mg/L	0.0010	97	85	115			
	nium	0.495	mg/L	0.0010	99	85	115			
	lium	0.491	mg/L	0.00050	98	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/07/17

Project: TMPA 6706150060

Work Order: B17050467

Analyte		Count R	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 109201
Lab ID:	B17050467-005BMS3	3 10 Sample	e Matrix	Spike			Run: ICPM	S206-B_170508A		05/09/	/17 07:14
Antimony			0.501	mg/L	0.0010	100	70	130			
Arsenic			0.503	mg/L	0.0016	101	70	130			
Beryllium			0.237	mg/L	0.0010	95	70	130			
Cadmium			0.234	mg/L	0.0010	93	70	130			
Chromium			0.469	mg/L	0.0050	92	70	130			
Cobalt			0.494	mg/L	0.0050	98	70	130			
Lead			0.492	mg/L	0.0010	97	70	130			
Molybdenu	m		0.488	mg/L	0.0010	98	70	130			
Selenium			0.463	mg/L	0.0036	93	70	130			
Thallium			0.476	mg/L	0.00050	95	70	130			
Lab ID:	B17050467-005BMSI	10 Sample	e Matrix	Spike Du	plicate		Run: ICPM	S206-B_170508A		05/09/	/17 07:18
Antimony			0.496	mg/L	0.0010	99	70	130	0.9	20	
Arsenic			0.496	mg/L	0.0016	99	70	130	1.2	20	
Beryllium			0.231	mg/L	0.0010	92	70	130	2.7	20	
Cadmium			0.246	mg/L	0.0010	98	70	130	4.8	20	
Chromium			0.472	mg/L	0.0050	92	70	130	0.6	20	
Cobalt			0.486	mg/L	0.0050	97	70	130	1.5	20	
Lead			0.483	mg/L	0.0010	95	70	130	1.8	20	
Molybdenu	m		0.475	mg/L	0.0010	95	70	130	2.7	20	
Selenium			0.443	mg/L	0.0036	89	70	130	4.4	20	
Thallium			0.466	mg/L	0.00050	93	70	130	2.2	20	
Method:	E200.8							Analytical	Run: I	CPMS206-B	_170511A
Lab ID:	QCS	Initial (Calibratio	on Verifica	ition Standard					05/11/	/17 11:02
Arsenic		C	0.0481	mg/L	0.0050	96	90	110			
Method:	E200.8									Batc	h: 109200
Lab ID:	MB-109200	Method	d Blank				Run: ICPM	S206-B_170511A		05/11/	/17 19:15
Arsenic			ND	mg/L	0.0002			_			
Method:	E200.8									Batc	h: 109201
Lab ID:	MB-109201	Method	d Blank				Run: ICPM	S206-B 170511A		05/11/	/17 20:19
Arsenic			ND	mg/L	0.0002			_			



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 06/07/17
Work Order: B17050467

Revised Date: 12/21/17

Project: TMPA 6706150060

	1111 71 07 00 100000									2 000 10	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	Run: I	HGCV202-B_	_170505A
Lab ID:	ICV	Initia	al Calibrati	on Verification	on Standard					05/05/	17 09:05
Mercury			0.00210	mg/L	0.00010	105	90	110			
Method:	E245.1									Batch	n: 109219
Lab ID:	MB-109219	Meth	hod Blank				Run: HGC\	/202-B_170505A		05/05/	17 14:33
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-109219	Labo	oratory Co	ntrol Sample	•		Run: HGC\	/202-B_170505A		05/05/	17 14:35
Mercury			0.00195	mg/L	0.00010	97	85	115			
Lab ID:	B17050340-001CMS	Sam	nple Matrix	Spike			Run: HGC\	/202-B_170505A		05/05/	17 14:39
Mercury			0.00199	mg/L	0.00010	100	70	130			
Lab ID:	B17050340-001CMSI) Sam	nple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170505A		05/05/	17 14:46
Mercury			0.00203	mg/L	0.00010	101	70	130	1.6	30	
Lab ID:	B17050467-009BMS	Sam	nple Matrix	Spike			Run: HGC\	/202-B_170505A		05/05/	17 15:20
Mercury			0.00196	mg/L	0.00010	98	70	130			
Lab ID:	B17050467-009BMSI) Sam	nple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170505A		05/05/	17 15:22
Mercury			0.00196	mg/L	0.00010	98	70	130	0.0	30	
Method:	E245.1							Analytica	l Run: I	HGCV202-B_	_170508A
Lab ID:	ICV	Initia	al Calibrati	on Verification	on Standard					05/08/	17 14:18
Mercury			0.00216	mg/L	0.00010	108	90	110			
Method:	E245.1									Batch	n: 109273
Lab ID:	MB-109273	Meth	hod Blank				Run: HGC\	/202-B_170508A		05/08/	17 15:43
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-109273	Labo	oratory Co	ntrol Sample)		Run: HGC\	/202-B_170508A		05/08/	17 15:45
Mercury			0.00224	mg/L	0.00010	112	85	115			
Lab ID:	B17050467-001BMS	Sam	nple Matrix	Spike			Run: HGC\	/202-B_170508A		05/08/	17 15:48
Mercury			0.00377	mg/L	0.00010	89	70	130			
Lab ID:	B17050467-001BMSI	O Sam	nple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170508A		05/08/	17 15:50

0.00010

89

70

130

0.3

30

0.00375

mg/L

Qualifiers:

Mercury



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:06/06/17Project:TMPA 6706150060Work Order:B17050467

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: E903.0		Batch: RA226-8497
Lab ID: LCS-RA226-8497	Laboratory Control Sample	Run: G542M-2_170510A 05/30/17 11:21
Radium 226	9.2 pCi/L	90 80 120
Lab ID: MB-RA226-8497	Method Blank	Run: G542M-2_170510A 05/30/17 11:21
Radium 226	0.1 pCi/L	U
Radium 226 precision (±)	0.09 pCi/L	
Radium 226 MDC	0.1 pCi/L	
Lab ID: C17040837-001CMS	Sample Matrix Spike	Run: G542M-2_170510A 05/30/17 11:21
Radium 226	16 pCi/L	80 70 130
Lab ID: C17040837-001CMSD	Sample Matrix Spike Duplicate	Run: G542M-2_170510A 05/30/17 11:21
Radium 226	17 pCi/L	83 70 130 3.6 20





Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:06/06/17Project:TMPA 6706150060Work Order:B17050467

Analyte	Result l	Units RL	. %REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05							Batch: RA	228-5498
Lab ID: LCS-228-RA226-8497	Laboratory Contro	•			IELEC-3_170510	В	05/22	/17 14:28
Radium 228	10 p	oCi/L	103	80	120			
Lab ID: MB-RA226-8497	Method Blank			Run: TENN	NELEC-3_170510	В	05/22	/17 14:28
Radium 228	-0.3 p	oCi/L						U
Radium 228 precision (±)	1 p	oCi/L						
Radium 228 MDC	2 p	oCi/L						
Lab ID: C17050117-003CMS	Sample Matrix Sp	pike		Run: TENN	IELEC-3_170510	В	05/22	/17 14:28
Radium 228	21 p	oCi/L	99	70	130			
Lab ID: C17050117-003CMSD	Sample Matrix Sp	pike Duplicate		Run: TENN	NELEC-3_170510	В	05/22	/17 14:28
Radium 228	19 p	oCi/L	87	70	130	12	20	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Cindy Rohrer

B17050467

Date Received: 5/4/2017

			_	
Reviewed by:	BL2000\tedwards		Re	eceived by: rs4
Reviewed Date:	5/7/2017		Cai	rrier name: Return-UPS NDA
Shipping container/cooler in	good condition?	Yes √	No 🗌	Not Present
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🔽	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🔽	No 🗌	
Chain of custody agrees with	sample labels?	Yes 🔽	No 🗌	
Samples in proper container	/bottle?	Yes 🔽	No 🗌	
Sample containers intact?		Yes 🔽	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🔽	No 🗌	
All samples received within h (Exclude analyses that are countries pH, DO, Res Cl, Su	onsidered field parameters	Yes ✓	No 🗌	
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes	No 🔽	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 1.4°C and shipping container 2 was 2.2°C. The temperature of the sample(s) for shipping container 3 was -1.0°C.



Chain of Custody & Analytical Request Record

* No temp. blank Sent with small cooler. Page / of (Three coolers Comments

Report Information (if different than Account Information) ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other Special Report/Formats Company/Name Mailing Address City, State, Zip Matrix Codes Contact Phone Email **Æ**mail #375 greg. seifert @ amechu.com

Mailing Address 3755 S, Capital of TX

Phone 512-795-0360

Gres Seifert

Contact

Austin, TX 78704

City, State, Zip

Email

Company/Name Amec Foster Wheeler

Account Information (Billing information)

Analysis Requested A-Air **Bottle Order** 6706150060 Project Name, PWSID, Permit, etc. TMPA Quote Project Information Purchase Order

V - Vegetation B - Bioassay DW - Drinking Water S - Solits/ Solids W- Water 0 - Other

All turnaround times are standard unless marked as RUSH.

MUST be contacted prior to RUSH sample submittal for

Energy Laboratories

charges and scheduling -

See Instructions Page

See Attached

ELILABID

BA-DSOULD-COU

43

B D00 SSS 8 60 000

600

YP5

Matrix (See Codes Above)

3

1

Number of Containers

0935 Time

% □

Š

EPA/State Compliance

Sampler Phone 5/2-24/-252

Sampler Name Brian Gieselman

Sample Origin State

MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending.

Collection

☐ Unprocessed ore (NOT ground or refined)*

☐ Byproduct 11 (e)2 material

Date

Sample Identification Name, Location, Inferval, etc.) SFL MW-3

SFL MW-4

MNW-18

1H37 1609

1238

1038

MNW-16 MNW-15 MNW-17

EQBK-SCM-SOUT DuP-1

18/1

121

1845

Signature Brian Gicselman Relinquished by (print)

Relinquished by (print)

Record MUST

be signed

Received by Laboratory (print) Received by (print) LABORATORY USE ONLY on <u>S</u> ✓ Temp Blank Signature Receipt Temp Date/Time 5/3/17 @ 0900 Date/Time _ ≺ Intact Custody Seals Y N C B

Payment Type sh Check Cash ပ္ပ

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

Page 26 of 26

Receipt Number (cash/check only)

Amount \$

Signature

Date/Time

02:2 CIMING

Cooler ID(s)

Shipped By

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17050604 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 13 samples for Texas Municipal Power Agency on 5/5/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17050604-001	SFL MW-2	05/03/17 10:06 05/05/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17050604-002	SFL MW-5	05/03/17 11:10 05/05/17	Ground Water	Same As Above
B17050604-003	SSP/APMW-1	05/03/17 14:20 05/05/17	Ground Water	Same As Above
B17050604-004	SFL MW-6	05/03/17 14:22 05/05/17	Ground Water	Same As Above
B17050604-005	SSP MW-2	05/03/17 15:45 05/05/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved
B17050604-006	AP MW-3	05/03/17 16:16 05/05/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17050604-007	EQBK-SCM-050317	05/03/17 16:50 05/05/17	Ground Water	Same As Above
B17050604-008	APMW-1D	05/04/17 8:57 05/05/17	Ground Water	Same As Above
B17050604-009	APMW-5	05/04/17 11:01 05/05/17	Ground Water	Same As Above
B17050604-010	APMW-4	05/04/17 12:56 05/05/17	Ground Water	Same As Above

ANALYTICAL SUMMARY REPORT

B17050604-011	DUP-2	05/04/17 0:00 05	5/05/17	Ground Water	Same As Above
B17050604-012	DUP-3	05/04/17 0:00 05	5/05/17	Ground Water	Same As Above
B17050604-013	EQBK-BJG-50417	05/04/17 13:54 05	5/05/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 05/31/17

 Project:
 TMPA 6706150060

 Work Order:
 B17050604

 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The laboratory was unable to lower the reporting limit for Antimony to 0.006 mg/L for the following samples:

Sample Revised Reporting Limit

EQBK-SCM-050317 (B17050604-007) 0.02 mg/L APMW-1D (B17050604-008) 0.04 mg/L EQBK-BJG-50417 (B17050604-013) 0.02 mg/L

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050604-001

 Client Sample ID:
 SFL MW-2

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/03/17 10:06
DateReceived: 05/05/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Analyses	Nesun	Offics	Qualifiers	11.	401	Wethou	Analysis Date / By
MAJOR IONS							
Calcium	806	mg/L	D	2		E200.7	05/11/17 00:11 / rlh
Magnesium	122	mg/L		1		E200.7	05/11/17 00:11 / rlh
Potassium	47	mg/L		1		E200.7	05/11/17 00:11 / rlh
Sodium	1610	mg/L	D	8		E200.7	05/11/17 00:11 / rlh
PHYSICAL PROPERTIES							
pH	6.6	s.u.	Н	0.1		A4500-H B	05/05/17 19:28 / pjw
Solids, Total Dissolved TDS @ 180 C	6720	mg/L	D	90		A2540 C	05/08/17 11:07 / rik
INORGANICS							
Chloride	2760	mg/L	D	10		E300.0	05/10/17 03:21 / cjm
Sulfate		mg/L	D	40		E300.0	05/10/17 03:21 / cjm
Fluoride		mg/L		0.1		A4500-F C	05/08/17 20:29 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/12/17 03:50 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 03:50 / jpv
Barium		mg/L		0.01		E200.7	05/11/17 00:11 / rlh
Beryllium	0.002	mg/L		0.001		E200.8	05/12/17 03:50 / jpv
Boron	0.55	mg/L	D	0.07		E200.7	05/11/17 00:11 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 03:50 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/12/17 03:50 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/12/17 03:50 / jpv
Lead	ND	mg/L		0.01		E200.8	05/12/17 03:50 / jpv
Lithium	0.53	mg/L	D	0.09		E200.7	05/11/17 00:11 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 15:52 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/12/17 03:50 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/12/17 03:50 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 03:50 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	2.1	pCi/L				E903.0	05/30/17 11:45 / eli-ca
Radium 226 precision (±)	0.46	pCi/L				E903.0	05/30/17 11:45 / eli-ca
Radium 226 MDC	0.16	pCi/L				E903.0	05/30/17 11:45 / eli-ca
Radium 228	5.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.0	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDO ME

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050604-002

 Client Sample ID:
 SFL MW-5

Revised Date: 12/21/17
Report Date: 05/31/17

Collection Date: 05/03/17 11:10

DateReceived: 05/05/17

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
MAJOR IONS						
Calcium	883	mg/L	D	2	E200.7	05/11/17 00:29 / rlh
Magnesium		mg/L		1	E200.7	05/11/17 00:29 / rlh
Potassium		mg/L		1	E200.7	05/11/17 00:29 / rlh
Sodium	1680	mg/L	D	8	E200.7	05/11/17 00:29 / rlh
PHYSICAL PROPERTIES						
Н	4.8	s.u.	Н	0.1	A4500-H B	05/05/17 19:33 / pjw
Solids, Total Dissolved TDS @ 180 C	7380	mg/L	D	90	A2540 C	05/08/17 11:07 / rik
NORGANICS						
Chloride	3040	mg/L	D	10	E300.0	05/10/17 03:40 / cjm
Sulfate	2150	mg/L	D	40	E300.0	05/10/17 03:40 / cjm
Fluoride	0.2	mg/L		0.1	A4500-F C	05/08/17 20:35 / bas
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.006	E200.8	05/13/17 12:04 / jpv
Arsenic	ND	mg/L		0.01	E200.8	05/12/17 04:17 / jpv
Barium	0.03	mg/L		0.01	E200.7	05/11/17 00:29 / rlh
Beryllium	0.012	mg/L		0.001	E200.8	05/13/17 12:04 / jpv
Boron	3.97	mg/L	D	0.07	E200.7	05/11/17 00:29 / rlh
Cadmium	0.005	mg/L		0.005	E200.8	05/12/17 04:17 / jpv
Chromium	ND	mg/L		0.01	E200.8	05/12/17 04:17 / jpv
Cobalt	0.05	mg/L		0.02	E200.8	05/12/17 04:17 / jpv
_ead	ND	mg/L		0.01	E200.8	05/12/17 04:17 / jpv
_ithium		mg/L	D	0.09	E200.7	05/11/17 00:29 / rlh
Mercury	ND	mg/L		0.001	E245.1	05/08/17 15:54 / mas
Molybdenum	ND	mg/L		0.05	E200.8	05/13/17 12:04 / jpv
Selenium	ND	mg/L		0.01	E200.8	05/12/17 04:17 / jpv
Thallium	ND	mg/L		0.002	E200.8	05/12/17 04:17 / jpv
RADIONUCLIDES - TOTAL						
Radium 226	2.1	pCi/L			E903.0	05/30/17 11:45 / eli-ca
Radium 226 precision (±)	0.46	pCi/L			E903.0	05/30/17 11:45 / eli-ca
Radium 226 MDC	0.16	pCi/L			E903.0	05/30/17 11:45 / eli-ca
Radium 228	7.8	pCi/L			RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	1.7	pCi/L			RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.0	pCi/L			RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228		pCi/L			A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.8	pCi/L			A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.1	pCi/L			A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDO ME

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-003 Client Sample ID: SSP/APMW-1

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/03/17 14:20 DateReceived: 05/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	681	mg/L		1		E200.7	05/11/17 00:33 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 00:33 / rlh
Potassium		mg/L		1		E200.7	05/11/17 00:33 / rlh
Sodium		mg/L	D	4		E200.7	05/11/17 00:33 / rlh
PHYSICAL PROPERTIES							
рН	6.1	s.u.	Н	0.1		A4500-H B	05/05/17 19:36 / pjw
Solids, Total Dissolved TDS @ 180 C	6460	mg/L	D	90		A2540 C	05/08/17 11:07 / rik
INORGANICS							
Chloride	1550	mg/L	D	6		E300.0	05/10/17 04:00 / cjm
Sulfate	3050	mg/L	D	20		E300.0	05/10/17 04:00 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	05/08/17 20:38 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 12:08 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 04:20 / jpv
Barium	0.04	mg/L		0.01		E200.7	05/11/17 00:33 / rlh
Beryllium	ND	mg/L		0.001		E200.8	05/13/17 12:08 / jpv
Boron	0.81	mg/L		0.05		E200.7	05/11/17 00:33 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 04:20 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/12/17 04:20 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/12/17 04:20 / jpv
Lead	ND	mg/L		0.01		E200.8	05/12/17 04:20 / jpv
Lithium	1.50	mg/L	D	0.04		E200.7	05/11/17 00:33 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:24 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 12:08 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/12/17 04:20 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 04:20 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.26	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.13	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	1.3	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	0.70	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	1.5	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	0.7	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-004 Client Sample ID: SFL MW-6

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/03/17 14:22 DateReceived: 05/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	955	mg/L	D	2		E200.7	05/11/17 00:36 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 00:36 / rlh
Potassium		mg/L		1		E200.7	05/11/17 00:36 / rlh
Sodium		mg/L	D	8		E200.7	05/11/17 00:36 / rlh
PHYSICAL PROPERTIES							
pH	4.1	s.u.	Н	0.1		A4500-H B	05/05/17 19:38 / pjw
Solids, Total Dissolved TDS @ 180 C	8020	mg/L	D	90		A2540 C	05/08/17 11:07 / rik
INORGANICS							
Chloride	3560	mg/L	D	10		E300.0	05/10/17 04:19 / cjm
Sulfate	2260	mg/L	D	40		E300.0	05/10/17 04:19 / cjm
Fluoride	8.0	mg/L		0.1		A4500-F C	05/08/17 20:50 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 12:11 / jpv
Arsenic	0.02	mg/L		0.01		E200.8	05/12/17 04:24 / jpv
Barium	0.03	mg/L		0.01		E200.7	05/11/17 00:36 / rlh
Beryllium	0.054	mg/L		0.001		E200.8	05/13/17 12:11 / jpv
Boron	0.30	mg/L	D	0.07		E200.7	05/11/17 00:36 / rlh
Cadmium	0.010	mg/L		0.005		E200.8	05/12/17 04:24 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/12/17 04:24 / jpv
Cobalt	0.11	mg/L		0.02		E200.8	05/12/17 04:24 / jpv
Lead	ND	mg/L		0.01		E200.8	05/12/17 04:24 / jpv
Lithium	0.72	mg/L	D	0.09		E200.7	05/11/17 00:36 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:26 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 12:11 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/12/17 04:24 / jpv
Thallium	0.003	mg/L		0.002		E200.8	05/12/17 04:24 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	2.7	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.60	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	5.8	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	8.6	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

TMPA 6706150060 Project: Lab ID: B17050604-005 Client Sample ID: SSP MW-2

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/03/17 15:45 DateReceived: 05/05/17

Matrix: Ground Water

Analyses	Result	l lucita	Qualifiers	RL	MCL/ QCL Method	Analysis Date / By
Analyses	Result	Units	Quaimers	KL	QCL Method	Analysis Date / By
MAJOR IONS						
Calcium	899	mg/L		1	E200.7	05/11/17 23:03 / rlh
Magnesium	209	mg/L		1	E200.7	05/11/17 23:03 / rlh
Potassium	62	mg/L		1	E200.7	05/11/17 23:03 / rlh
Sodium	1190	mg/L	D	4	E200.7	05/11/17 23:03 / rlh
PHYSICAL PROPERTIES						
Н	5.4	s.u.	Н	0.1	A4500-H E	05/05/17 19:41 / pjw
Solids, Total Dissolved TDS @ 180 C	5960	mg/L	D	90	A2540 C	05/08/17 11:08 / rik
NORGANICS						
Chloride	2520	mg/L	D	6	E300.0	05/10/17 05:18 / cjm
Sulfate	2080	mg/L	D	20	E300.0	05/10/17 05:18 / cjm
luoride	0.2	mg/L		0.1	A4500-F C	05/08/17 20:56 / bas
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.006	E200.8	05/13/17 12:14 / jpv
Arsenic	ND	mg/L		0.01	E200.8	05/12/17 04:27 / jpv
Barium	0.06	mg/L		0.01	E200.7	05/11/17 23:03 / rlh
Beryllium	0.030	mg/L		0.001	E200.8	05/13/17 12:14 / jpv
Boron	0.50	mg/L		0.05	E200.7	05/11/17 23:03 / rlh
Cadmium	ND	mg/L		0.005	E200.8	05/12/17 04:27 / jpv
Chromium	ND	mg/L		0.01	E200.8	05/12/17 04:27 / jpv
Cobalt	0.06	mg/L		0.02	E200.8	05/12/17 04:27 / jpv
Lead	ND	mg/L		0.01	E200.8	05/12/17 04:27 / jpv
ithium	0.90	mg/L	D	0.04	E200.7	05/11/17 23:03 / rlh
Mercury	ND	mg/L		0.001	E245.1	05/08/17 16:27 / mas
Molybdenum	ND	mg/L		0.05	E200.8	05/13/17 12:14 / jpv
Selenium	ND	mg/L		0.01	E200.8	05/12/17 04:27 / jpv
Γhallium	ND	mg/L		0.002	E200.8	05/12/17 04:27 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-006 Client Sample ID: AP MW-3

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/03/17 16:16 DateReceived: 05/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	139	mg/L		1		E200.7	05/11/17 23:06 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:06 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:06 / rlh
Sodium		mg/L		1		E200.7	05/11/17 23:06 / rlh
PHYSICAL PROPERTIES							
рН	5.4	s.u.	Н	0.1		A4500-H B	05/05/17 19:43 / pjw
Solids, Total Dissolved TDS @ 180 C	1300	mg/L	D	20		A2540 C	05/08/17 11:08 / rik
INORGANICS							
Chloride	148	mg/L		1		E300.0	05/10/17 06:16 / cjm
Sulfate		mg/L	D	4		E300.0	05/10/17 06:16 / cjm
Fluoride		mg/L		0.1		A4500-F C	05/08/17 20:59 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 12:18 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 04:31 / jpv
Barium		mg/L		0.01		E200.8	05/12/17 04:31 / jpv
Beryllium	0.003	mg/L		0.001		E200.8	05/13/17 12:18 / jpv
Boron	3.73	mg/L		0.05		E200.7	05/11/17 23:06 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 04:31 / jpv
Chromium	ND	mg/L		0.01		E200.7	05/11/17 23:06 / rlh
Cobalt	0.05	mg/L		0.02		E200.7	05/11/17 23:06 / rlh
Lead	ND	mg/L		0.01		E200.8	05/12/17 04:31 / jpv
Lithium	0.05	mg/L		0.01		E200.7	05/11/17 23:06 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:29 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/11/17 23:06 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/12/17 04:31 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 04:31 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.67	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	2.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	0.88	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	2.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050604-007

 Client Sample ID:
 EQBK-SCM-050317

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/03/17 16:50
DateReceived: 05/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	05/11/17 23:10 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:10 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:10 / rlh
Sodium		mg/L		1		E200.7	05/11/17 23:10 / rlh
PHYSICAL PROPERTIES							
рН	5.8	s.u.	Н	0.1		A4500-H B	05/05/17 19:46 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	05/08/17 11:08 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	05/10/17 06:35 / cjm
Sulfate	ND	mg/L		1		E300.0	05/10/17 06:35 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	05/08/17 21:08 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L	L	0.02		E200.7	05/11/17 23:10 / rlh
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 04:34 / jpv
Barium	ND	mg/L		0.01		E200.7	05/11/17 23:10 / rlh
Beryllium	ND	mg/L		0.001		E200.7	05/11/17 23:10 / rlh
Boron	ND	mg/L		0.05		E200.7	05/11/17 23:10 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 04:34 / jpv
Chromium		mg/L		0.01		E200.7	05/11/17 23:10 / rlh
Cobalt	ND	mg/L		0.02		E200.7	05/11/17 23:10 / rlh
Lead	ND	mg/L		0.01		E200.8	05/12/17 04:34 / jpv
Lithium	ND	mg/L		0.01		E200.7	05/11/17 23:10 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:31 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/11/17 23:10 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/12/17 04:34 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 04:34 / jpv
RADIONUCLIDES - TOTAL							
Radium 226		pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	2.7	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC		pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	4.6	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	•				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

L - Lowest available reporting limit for the analytical

method used.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-008 Client Sample ID: APMW-1D

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/04/17 08:57 DateReceived: 05/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	74	mg/L		1		E200.7	05/11/17 23:13 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:13 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:13 / rlh
Sodium	317	mg/L		1		E200.7	05/11/17 23:13 / rlh
PHYSICAL PROPERTIES							
pH	6.3	s.u.	Н	0.1		A4500-H B	05/05/17 19:49 / pjw
Solids, Total Dissolved TDS @ 180 C	1240	mg/L	D	20		A2540 C	05/08/17 11:08 / rik
INORGANICS							
Chloride	227	mg/L		1		E300.0	05/10/17 06:55 / cjm
Sulfate	527	mg/L	D	4		E300.0	05/10/17 06:55 / cjm
Fluoride	0.7	mg/L		0.1		A4500-F C	05/08/17 21:11 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L	D	0.04		E200.7	05/11/17 23:13 / rlh
Arsenic	0.01	mg/L		0.01		E200.8	05/12/17 04:37 / jpv
Barium	0.01	mg/L		0.01		E200.7	05/11/17 23:13 / rlh
Beryllium	ND	mg/L		0.001		E200.7	05/11/17 23:13 / rlh
Boron	4.72	mg/L		0.05		E200.7	05/11/17 23:13 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 04:37 / jpv
Chromium	ND	mg/L		0.01		E200.7	05/11/17 23:13 / rlh
Cobalt	ND	mg/L		0.02		E200.7	05/11/17 23:13 / rlh
Lead	ND	mg/L		0.01		E200.8	05/12/17 04:37 / jpv
Lithium	0.03	mg/L		0.01		E200.7	05/11/17 23:13 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:33 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/11/17 23:13 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/12/17 04:37 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 04:37 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.50	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	2.0	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	0.93	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	2.5	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-009 Client Sample ID: APMW-5

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/04/17 11:01 DateReceived: 05/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	522	mg/L		1		E200.7	05/11/17 23:31 / rlh
Magnesium	116	mg/L		1		E200.7	05/11/17 23:31 / rlh
Potassium	43	mg/L		1		E200.7	05/11/17 23:31 / rlh
Sodium	662	mg/L	D	4		E200.7	05/11/17 23:31 / rlh
PHYSICAL PROPERTIES							
рН	3.6	s.u.	Н	0.1		A4500-H B	05/05/17 19:51 / pjw
Solids, Total Dissolved TDS @ 180 C	4530	mg/L	D	40		A2540 C	05/08/17 11:08 / rik
INORGANICS							
Chloride	472	mg/L	D	6		E300.0	05/10/17 07:14 / cjm
Sulfate	2930	mg/L	D	20		E300.0	05/10/17 07:14 / cjm
Fluoride	1.2	mg/L		0.1		A4500-F C	05/09/17 10:32 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 02:28 / jpv
Arsenic	0.02	mg/L		0.01		E200.8	05/12/17 05:01 / jpv
Barium	0.02	mg/L		0.01		E200.7	05/11/17 23:31 / rlh
Beryllium	0.084	mg/L		0.001		E200.8	05/13/17 02:28 / jpv
Boron	3.39	mg/L		0.05		E200.7	05/11/17 23:31 / rlh
Cadmium	0.009	mg/L		0.005		E200.8	05/12/17 05:01 / jpv
Chromium		mg/L		0.01		E200.8	05/12/17 05:01 / jpv
Cobalt	0.19	mg/L		0.02		E200.8	05/13/17 02:28 / jpv
Lead	ND	mg/L		0.01		E200.8	05/12/17 05:01 / jpv
Lithium		mg/L	D	0.04		E200.7	05/11/17 23:31 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:35 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 02:28 / jpv
Selenium		mg/L		0.01		E200.8	05/12/17 05:01 / jpv
Thallium	0.002	mg/L		0.002		E200.8	05/12/17 05:01 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.79	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	2.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	0.87	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.1	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	2.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-010 Client Sample ID: APMW-4

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/04/17 12:56 DateReceived: 05/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	532	mg/L		1		E200.7	05/11/17 23:48 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:48 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:48 / rlh
Sodium		mg/L	D	2		E200.7	05/11/17 23:48 / rlh
PHYSICAL PROPERTIES							
рН	6.0	s.u.	Н	0.1		A4500-H B	05/05/17 19:54 / pjw
Solids, Total Dissolved TDS @ 180 C	3930	mg/L	D	40		A2540 C	05/08/17 11:08 / rik
INORGANICS							
Chloride	505	mg/L	D	3		E300.0	05/10/17 07:34 / cjm
Sulfate	2330	mg/L	D	9		E300.0	05/10/17 07:34 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	05/09/17 11:20 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 02:31 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 05:21 / jpv
Barium	0.01	mg/L		0.01		E200.7	05/11/17 23:48 / rlh
Beryllium	ND	mg/L		0.001		E200.7	05/11/17 23:48 / rlh
Boron	2.07	mg/L		0.05		E200.7	05/11/17 23:48 / rlh
Cadmium	ND	mg/L		0.005		E200.7	05/11/17 23:48 / rlh
Chromium	ND	mg/L		0.01		E200.8	05/12/17 05:21 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/13/17 02:31 / jpv
Lead	ND	mg/L		0.01		E200.8	05/12/17 05:21 / jpv
Lithium	0.93	mg/L	D	0.02		E200.7	05/11/17 23:48 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:37 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/11/17 23:48 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/12/17 05:21 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 05:21 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.38	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228	2.0	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.1	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228	2.4	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-011

Client Sample ID: DUP-2

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/04/17 DateReceived: 05/05/17

MAJOR IONS						MCL/		
Calcium 724 mg/L 1 mg/L 2 m	Analyses	Result	Units	Qualifiers	RL		Method	Analysis Date / By
Calcium 724 mg/L 1 mg/L 2 m	MA IOR IONS							
Magnesium 182 mg/L 1 E200.7 b(5111/17 23:52 / rlh Potassium 51 mg/L 1 E200.7 b(5111/17 23:52 / rlh Sodium 1130 mg/L D 4 E200.7 b(5111/17 23:52 / rlh PHYSICAL PROPERTIES pH 4.5 s.u. H 0.1 A4500-H B 05/05/17 20:04 / plw Solidas, Total Dissolved TDS @ 180 C 6490 mg/L D 90 A2540 C 05/08/17 15:22 / rik INORGANICS Chloride 1860 mg/L D 6 E300.0 05/10/17 07:53 / cjm Sulfate 2510 mg/L D 6 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 6 E300.0 05/10/17 07:53 / cjm Sulfate 2510 mg/L D 6 E300.0 05/10/17 07:53 / cjm EWETALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Barium 0.03 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/		724	ma/l		1		F200.7	05/11/17 23·52 / rlh
Potassium 51 mg/L 1 mg/L 1 mg/L 1 mg/L 1 mg/L 1 mg/L 2 mg/L 2 mg/L 2 mg/L 2 mg/L 2 mg/L 200.7 05/11/17 23:52 / rlh 25/11/17 23:52 / rlh <			Ū					
Sodium	_		•		-			
PHYSICAL PROPERTIES pH 4.5 s.u. H 0.1 A4500-H B 05/05/17 20:04 / pjw Solids, Total Dissolved TDS @ 180 C 6490 mg/L D 90 A2540 C 05/08/17 15:22 / rik INORGANICS Chloride 1860 mg/L D 6 E300.0 05/10/17 07:53 / cjm Sulfate 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Sulfate 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 1.4 A4500-F C 05/09/17 11:27 / bas METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Beryllium 0.119 mg/L 0.001 E200.8 05/12/17 05:24 / jpv Beryllium 0.119 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Beryllium <td></td> <td></td> <td>Ū</td> <td>D</td> <td>-</td> <td></td> <td></td> <td></td>			Ū	D	-			
pH 4.5 s.u. H 0.1 A4500-H B 05/05/17 20:04 / pjw Solids, Total Dissolved TDS @ 180 C 6490 mg/L D 90 A2540 C 05/08/17 20:04 / pjw INORGANICS Sulfate 1860 mg/L D 6 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.001 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Barium		1100	9/ =	٥	•		2200.7	00/11/11/20:02/1111
Solids, Total Dissolved TDS @ 180 C 6490 mg/L D 90 A2540 C 05/08/17 15:22 / rik	PHYSICAL PROPERTIES							
NORGANICS	рН	4.5	s.u.				A4500-H B	05/05/17 20:04 / pjw
Chloride 1860 mg/L D 6 E300.0 05/10/17 07:53 / cjm Sulfate 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 0.7 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 0.7 mg/L D.1 A4500-F C 05/09/17 11:27 / bas METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.001 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lead ND mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Selenium ND mg/L 0.001 E245.1 05/08/17 12:35 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv RabloNUCLIDES - TOTAL Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L	Solids, Total Dissolved TDS @ 180 C	6490	mg/L	D	90		A2540 C	05/08/17 15:22 / rik
Sulfate 2510 mg/L D 20 E300.0 05/10/17 07:53 / cjm Fluoride 0.7 mg/L 0.1 A4500-F C 05/09/17 11:27 / bas METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Beryllium 0.19 mg/L 0.01 E200.8 05/13/17 02:35 / jpv Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/13/17 02:35 / jpv Chromium ND mg/L 0.01 E200.8 05/13/17 02:34 / jpv Chobalt 0.62 mg/L 0.01 E200.8 05/13/17 02:34 / jpv Lead ND mg/L 0.01 E200.8 05/13/17 02:34 / jpv Lithium 0.67 mg/L D .04 <t< td=""><td>INORGANICS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	INORGANICS							
Fluoride 0.7 mg/L 0.1 A4500-F C 05/09/17 11:27 / bas METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chotal 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Chadium 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.04 E200.8 05/12/17 05:24 / jpv Mercury ND mg/L 0.001 E245.1 05/08/17 11:39 / mas Molybdenum N	Chloride	1860	mg/L	D	6		E300.0	05/10/17 07:53 / cjm
Fluoride 0.7 mg/L 0.1 A4500-F C 05/09/17 11:27 / bas METALS, TOTAL RECOVERABLE Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chotal 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Chadium 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.04 E200.8 05/12/17 05:24 / jpv Mercury ND mg/L 0.001 E245.1 05/08/17 11:39 / mas Molybdenum N	Sulfate	2510	mg/L	D	20		E300.0	05/10/17 07:53 / cjm
Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 02:35 / jpv Boron 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.02 E200.8 05/13/17 02:35 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.04 E200.7 05/13/17 02:35 / jpv <td>Fluoride</td> <td>0.7</td> <td>mg/L</td> <td></td> <td>0.1</td> <td></td> <td>A4500-F C</td> <td></td>	Fluoride	0.7	mg/L		0.1		A4500-F C	
Antimony ND mg/L 0.006 E200.8 05/13/17 02:35 / jpv Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 02:35 / jpv Boron 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.02 E200.8 05/13/17 02:35 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L 0.04 E200.7 05/13/17 02:35 / jpv <td>METALS. TOTAL RECOVERABLE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	METALS. TOTAL RECOVERABLE							
Arsenic ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Chobalt 0.62 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.001 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.001 E245.1 05/08/17 10:39 / jpv	•	ND	ma/L		0.006		E200.8	05/13/17 02:35 / ipv
Barium 0.03 mg/L 0.01 E200.7 05/11/17 23:52 / rlh Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/12/17 05:24 / jpv Lead ND mg/L 0.01 E200.8 05/11/17 05:24 / jpv Lithium 0.67 mg/L 0.04 E200.8 05/13/17 02:35 / jpv Mercury ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.05 E200.8 05/12/17 05:24 / jpv	•		•		0.01		E200.8	
Beryllium 0.119 mg/L 0.001 E200.8 05/13/17 02:35 / jpv Boron 2.50 mg/L 0.05 E200.7 05/11/17 23:52 / rlh Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.8 05/11/17 23:52 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.09 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 precision (±) 1.2	Barium		•		0.01		E200.7	
Cadmium 0.073 mg/L 0.005 E200.8 05/12/17 05:24 / jpv Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 05:24 / jpv Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.09 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL E E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radiu	Beryllium		-		0.001		E200.8	05/13/17 02:35 / jpv
Chromium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 23:52 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.001 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Boron	2.50	mg/L		0.05		E200.7	05/11/17 23:52 / rlh
Cobalt 0.62 mg/L 0.02 E200.8 05/13/17 02:35 / jpv Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 23:52 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Cadmium	0.073	mg/L		0.005		E200.8	05/12/17 05:24 / jpv
Lead ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 23:52 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Chromium	ND	mg/L		0.01		E200.8	05/12/17 05:24 / jpv
Lithium 0.67 mg/L D 0.04 E200.7 05/11/17 23:52 / rlh Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/13/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 PCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 Precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Cobalt	0.62	mg/L		0.02		E200.8	05/13/17 02:35 / jpv
Mercury ND mg/L 0.001 E245.1 05/08/17 16:39 / mas Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Lead	ND	mg/L		0.01		E200.8	05/12/17 05:24 / jpv
Molybdenum ND mg/L 0.05 E200.8 05/13/17 02:35 / jpv Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Lithium	0.67	mg/L	D	0.04		E200.7	05/11/17 23:52 / rlh
Selenium ND mg/L 0.01 E200.8 05/12/17 05:24 / jpv Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:39 / mas
Thallium 0.009 mg/L 0.002 E200.8 05/12/17 05:24 / jpv RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 02:35 / jpv
RADIONUCLIDES - TOTAL Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Selenium	ND	mg/L		0.01		E200.8	05/12/17 05:24 / jpv
Radium 226 6.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Thallium	0.009	mg/L		0.002		E200.8	05/12/17 05:24 / jpv
Radium 226 precision (±) 1.2 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	RADIONUCLIDES - TOTAL							
Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Radium 226	6.2	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 226 MDC 0.18 pCi/L E903.0 05/30/17 11:46 / eli-ca Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Radium 226 precision (±)	1.2	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228 20 pCi/L RA-05 05/24/17 12:03 / eli-ca Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca		0.18	pCi/L				E903.0	05/30/17 11:46 / eli-ca
Radium 228 precision (±) 3.8 pCi/L RA-05 05/24/17 12:03 / eli-ca	Radium 228						RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC 1.3 pCi/L RA-05 05/24/17 12:03 / eli-ca	Radium 228 precision (±)		•				RA-05	05/24/17 12:03 / eli-ca
	,		•				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228 25.9 pCi/L A7500-RA 05/31/17 11:00 / eli-ca	Radium 226 + Radium 228	25.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±) 4.0 pCi/L A7500-RA 05/31/17 11:00 / eli-ca	Radium 226 + Radium 228 precision (±)	4.0	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC 1.4 pCi/L A7500-RA 05/31/17 11:00 / eli-ca	Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Revised Date: 12/21/17

Collection Date: 05/04/17

Report Date: 05/31/17

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050604-012

DateReceived: 05/05/17 Client Sample ID: DUP-3 Matrix: Ground Water

Analyses	Result	Unito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesuit	Units	Qualifiers	- INL	- QUL	Wethou	Allalysis Date / By
MAJOR IONS							
Calcium	536	mg/L		1		E200.7	05/11/17 23:55 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:55 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:55 / rlh
Sodium	682	mg/L	D	4		E200.7	05/11/17 23:55 / rlh
PHYSICAL PROPERTIES							
рН	3.6	s.u.	Н	0.1		A4500-H B	05/05/17 20:09 / pjw
Solids, Total Dissolved TDS @ 180 C	4720	mg/L	D	40		A2540 C	05/08/17 15:22 / rik
INORGANICS							
Chloride	464	mg/L	D	6		E300.0	05/10/17 08:13 / cjm
Sulfate		mg/L	D	20		E300.0	05/10/17 08:13 / cjm
Fluoride		mg/L	Б	0.1		A4500-F C	05/09/17 11:37 / bas
		9/ =		0		71.000	00,00,11 11101 , 240
METALS, TOTAL RECOVERABLE							
Antimony		mg/L		0.006		E200.8	05/13/17 02:38 / jpv
Arsenic		mg/L		0.01		E200.8	05/12/17 05:28 / jpv
Barium		mg/L		0.01		E200.7	05/11/17 23:55 / rlh
Beryllium		mg/L		0.001		E200.8	05/13/17 02:38 / jpv
Boron		mg/L		0.05		E200.7	05/11/17 23:55 / rlh
Cadmium		mg/L		0.005		E200.8	05/12/17 05:28 / jpv
Chromium		mg/L		0.01		E200.8	05/12/17 05:28 / jpv
Cobalt		mg/L		0.02		E200.8	05/13/17 02:38 / jpv
Lead		mg/L		0.01		E200.8	05/12/17 05:28 / jpv
Lithium		mg/L	D	0.04		E200.7	05/11/17 23:55 / rlh
Mercury		mg/L		0.001		E245.1	05/08/17 16:41 / mas
Molybdenum		mg/L		0.05		E200.8	05/13/17 02:38 / jpv
Selenium		mg/L		0.01		E200.8	05/12/17 05:28 / jpv
Thallium	0.002	mg/L		0.002		E200.8	05/12/17 05:28 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.1	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	0.29	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228	2.4	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 precision (±)	0.91	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC		pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228	3.5	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050604-013

 Client Sample ID:
 EQBK-BJG-50417

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/04/17 13:54
DateReceived: 05/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	05/11/17 23:59 / rlh
Magnesium		mg/L		1		E200.7	05/11/17 23:59 / rlh
Potassium		mg/L		1		E200.7	05/11/17 23:59 / rlh
Sodium		mg/L		1		E200.7	05/11/17 23:59 / rlh
PHYSICAL PROPERTIES							
рН	5.6	s.u.	Н	0.1		A4500-H B	05/05/17 20:12 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	05/08/17 15:22 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	05/10/17 08:32 / cjm
Sulfate	ND	mg/L		1		E300.0	05/10/17 08:32 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	05/09/17 11:46 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L	L	0.02		E200.7	05/11/17 23:59 / rlh
Arsenic	ND	mg/L		0.01		E200.8	05/12/17 05:41 / jpv
Barium	ND	mg/L		0.01		E200.7	05/11/17 23:59 / rlh
Beryllium	ND	mg/L		0.001		E200.7	05/11/17 23:59 / rlh
Boron	ND	mg/L		0.05		E200.7	05/11/17 23:59 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/12/17 05:41 / jpv
Chromium		mg/L		0.01		E200.7	05/11/17 23:59 / rlh
Cobalt	ND	mg/L		0.02		E200.7	05/11/17 23:59 / rlh
Lead	ND	mg/L		0.01		E200.8	05/12/17 05:41 / jpv
Lithium	ND	mg/L		0.01		E200.7	05/11/17 23:59 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/08/17 16:47 / mas
Molybdenum	ND	mg/L		0.05		E200.7	05/11/17 23:59 / rlh
Selenium	ND	mg/L		0.01		E200.8	05/12/17 05:41 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/12/17 05:41 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	0.11	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228		pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	05/24/17 10:30 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

L - Lowest available reporting limit for the analytical method used.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

U - Not detected at minimum detectable concentration



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:05/31/17Project:TMPA 6706150060Work Order:B17050604

Analyte	Result Units F	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: E903.0		Batch: RA226-850
Lab ID: LCS-RA226-8500 Radium 226	Laboratory Control Sample 8.3 pCi/L	Run: G5000W_170516B 05/30/17 11:4 82 80 120
Lab ID: MB-RA226-8500 Radium 226 Radium 226 precision (±) Radium 226 MDC	Method Blank 0.1 pCi/L 0.1 pCi/L 0.2 pCi/L	Run: G5000W_170516B 05/30/17 11:4 U
Lab ID: B17050604-001CMS Radium 226	Sample Matrix Spike 19 pCi/L	Run: G5000W_170516B 05/30/17 11:4 82 70 130
Lab ID: B17050604-001CMSD Radium 226	Sample Matrix Spike Duplicate 17 pCi/L	Run: G5000W_170516B 05/30/17 11:4 76 70 130 6.7 20





Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 05/31/17 Project: TMPA 6706150060 Work Order: B17050604

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: RA-05		Batch: RA228-5500
Lab ID: LCS-228-RA226-8500	Laboratory Control Sample	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	9.8 pCi/L	91 80 120
Lab ID: MB-RA226-8500	Method Blank	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	0.5 pCi/L	U
Radium 228 precision (±)	0.8 pCi/L	
Radium 228 MDC	1 pCi/L	
Lab ID: B17050604-013CMS	Sample Matrix Spike	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	20 pCi/L	82 70 130
Lab ID: B17050604-013CMSD	Sample Matrix Spike Duplic	ate Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	20 pCi/L	80 70 130 2.0 20



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 05/24/17Project:TMPA 6706150060Work Order: B17050604

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch	n: 109290
Lab ID: MB-109290	Metho	od Blank				Run: BAL#	SD-15_170508D		05/08/	17 11:05
Solids, Total Dissolved TDS @ 1	80 C	ND	mg/L	4						
Lab ID: LCS-109290	Labor	ratory Con	trol Sample	е		Run: BAL #	SD-15_170508D		05/08/	17 11:05
Solids, Total Dissolved TDS @ 1	80 C	976	mg/L	10	99	90	110			
Lab ID: B17050573-001A DU	J P Samp	ole Duplica	ite			Run: BAL #	SD-15_170508D		05/08/	17 11:05
Solids, Total Dissolved TDS @ 1	80 C	213	mg/L	10				3.0	5	
Lab ID: B17050604-001A DU	J P Samp	ole Duplica	ite			Run: BAL #	SD-15_170508D		05/08/	17 11:07
Solids, Total Dissolved TDS @ 1	80 C	6720	mg/L	85				0.0	5	
Method: A2540 C									Batch	n: 109303
Lab ID: MB-109303	Metho	od Blank				Run: BAL#	SD-15_170508E		05/08/	17 15:21
Solids, Total Dissolved TDS @ 1	80 C	ND	mg/L	4						
Lab ID: LCS-109303	Labor	ratory Con	trol Sample	е		Run: BAL #	SD-15_170508E		05/08/	17 15:22
Solids, Total Dissolved TDS @ 1	80 C	988	mg/L	10	99	90	110			
Lab ID: B17050604-011A DU	J P Samp	ole Duplica	ite			Run: BAL #	SD-15_170508E		05/08/	17 15:22
Solids, Total Dissolved TDS @ 1	80 C	6380	mg/L	87				1.7	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytica	al Run:	MAN-TECH_	_170508B
Lab ID:	ICV	Initia	al Calibratio	on Verification St	andard					05/08/	17 16:59
Fluoride			1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C									Batch:	R279515
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170508B		05/08/	17 16:54
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_170508B		05/08/	17 16:56
Fluoride			0.980	mg/L	0.10	98	90	110			
Lab ID:	B17050599-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH 170508B		05/08/	17 20:21
Fluoride			1.10	mg/L	0.10	102	80	120			
Lab ID:	B17050599-001AMSI	D Sam	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170508B		05/08/	17 20:24
Fluoride			1.10	mg/L	0.10	102	80	120	0.0	10	
Method:	A4500-F C							Analytica	al Run:	MAN-TECH_	_170509A
Lab ID:	ICV	Initia	al Calibratio	on Verification St	andard					05/09/	17 10:18
Fluoride			1.03	mg/L	0.10	103	90	110			
Method:	A4500-F C									Batch:	R279548
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170509A		05/09/	17 10:13
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_170509A		05/09/	17 10:16
Fluoride			1.01	mg/L	0.10	101	90	110			
Lab ID:	B17050604-009AMS	San	nple Matrix	Spike			Run: MAN-	TECH_170509A		05/09/	17 10:44
Fluoride			1.61	mg/L	0.10	42	80	120			S
Lab ID:	B17050604-009AMSI	D Sam	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170509A		05/09/	17 10:54
Fluoride			1.59	mg/L	0.10	40	80	120	1.2	10	S

Qualifiers:



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 05/24/17Project:TMPA 6706150060Work Order: B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	l Run: Pl	HSC _101-B_	_170505A
Lab ID:	pH 8	Init	ial Calibratio	n Verificati	on Standard					05/05/	/17 09:02
рН			7.98	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Coi			05/05/	/17 18:51					
рН			7.04	s.u.	0.10	101	98	102			
Lab ID:	CCV - pH 7	Coi	ntinuing Cali	bration Ver	ification Standa	rd				05/05/	/17 19:56
рН			7.03	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R279325
Lab ID:	B17050604-001ADUF	S ar	mple Duplica	ate			Run: PHSC	_101-B_17050	5A	05/05/	/17 19:30
рН			6.62	s.u.	0.10				0.2	3	
Lab ID:	B17050604-011ADU	S Sar	mple Duplica	ate			Run: PHSC	_101-B_17050	5A	05/05/	/17 20:07
рН			4.52	s.u.	0.10				0.0	3	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 05/31/17

Project: TMPA 6706150060 **Work Order**: B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.7							Analy	tical Run: ICP203-B	_170510A
Lab ID:	ICV	7 Con	tinuing Cal	ibration Ve	erification Standa	rd			05/10	/17 11:38
Barium			2.50	mg/L	0.10	100	95	105		
Boron			2.51	mg/L	0.10	100	95	105		
Calcium			24.7	mg/L	1.0	99	95	105		
Lithium			1.23	mg/L	0.10	99	95	105		
Magnesium	n		24.3	mg/L	1.0	97	95	105		
Potassium			24.8	mg/L	1.0	99	95	105		
Sodium			24.8	mg/L	1.0	99	95	105		
Method:	E200.7								Batc	h: 109251
Lab ID:	MB-109251	12 Meth	nod Blank				Run: ICP20	3-B_170510A	05/10	/17 23:22
Antimony			ND	mg/L	0.02			_		
Barium			ND	mg/L	0.0005					
Beryllium			ND	mg/L	0.0001					
Boron			ND	mg/L	0.003					
Calcium			ND	mg/L	0.08					
Chromium			ND	mg/L	0.002					
Cobalt			ND	mg/L	0.005					
Lithium			ND	mg/L	0.004					
Magnesium	n		ND	mg/L	0.01					
Molybdenu	m		ND	mg/L	0.007					
Potassium			ND	mg/L	0.07					
Sodium			ND	mg/L	0.03					
Lab ID:	LCS-109251	12 Labo	oratory Co	ntrol Samp	ole		Run: ICP20	3-B_170510A	05/10	/17 23:25
Antimony			0.463	mg/L	0.10	93	85	115		
Barium			0.471	mg/L	0.10	94	85	115		
Beryllium			0.244	mg/L	0.010	98	85	115		
Boron			0.446	mg/L	0.10	89	85	115		
Calcium			24.5	mg/L	1.0	98	85	115		
Chromium			0.483	mg/L	0.050	97	85	115		
Cobalt			0.470	mg/L	0.050	94	85	115		
Lithium			0.484	mg/L	0.10	97	85	115		
Magnesium	n		24.6	mg/L	1.0	99	85	115		
Molybdenu	ım		0.475	mg/L	0.10	95	85	115		
Potassium			24.2	mg/L	1.0	97	85	115		
Sodium			24.7	mg/L	1.0	99	85	115		
Lab ID:	B17050604-001BMS3	3 12 Sam	ple Matrix	Spike			Run: ICP20	3-B_170510A	05/11	/17 00:22
Antimony			0.471	mg/L	0.41	94	70	130		
Barium			0.525	mg/L	0.050	101	70	130		
Beryllium			0.268	mg/L	0.0029	106	70	130		
Boron			1.04	mg/L	0.068	98	70	130		
Calcium			810	mg/L	1.6		70	130		Α
Chromium			0.494	mg/L	0.041	99	70	130		
Cobalt			0.562	mg/L	0.10	112	70	130		

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Result

Units



Count

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/21/17 **Report Date:** 05/31/17 Work Order: B17050604

Project: TMPA 6706150060

Analyte

RL %REC Low Limit High Limit **RPD RPDLimit** Qual Batch: 109251

Method:	E200.7								Batch	: 109251
Lab ID:	B17050604-001BMS3	12 Sample Matrix	Spike			Run: ICP203-B	_170510A		05/11/	17 00:22
Lithium		1.00	mg/L	0.10	94	70	130			
Magnesiur	n	145	mg/L	1.5		70	130			Α
Molybdenu	ım	0.579	mg/L	0.14	116	70	130			
Potassium	ı	76.1	mg/L	1.4	116	70	130			
Sodium		1590	mg/L	8.4		70	130			Α
Lab ID:	B17050604-001BMSD	12 Sample Matrix	Spike Duplicate			Run: ICP203-B	_170510A		05/11/	17 00:25
Antimony		ND	mg/L	0.41	0	70	130		20	0
Barium		0.516	mg/L	0.050	99	70	130	1.9	20	
Beryllium		0.270	mg/L	0.0029	107	70	130	8.0	20	
Boron		1.10	mg/L	0.068	110	70	130	5.7	20	
Calcium		809	mg/L	1.6		70	130	0.1	20	Α
Chromium		0.498	mg/L	0.041	100	70	130	1.0	20	
Cobalt		0.605	mg/L	0.10	121	70	130	7.3	20	
Lithium		1.01	mg/L	0.10	96	70	130	0.6	20	
Magnesiur	n	146	mg/L	1.5		70	130	0.9	20	Α
Molybdenu	ım	0.560	mg/L	0.14	112	70	130	3.2	20	
Potassium	1	70.1	mg/L	1.4	92	70	130	8.2	20	
Sodium		1550	mg/L	8.4		70	130	2.6	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

O - Diluted out.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060

Revised Date: 12/21/17 **Report Date:** 05/31/17

Work Order: B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDI	Limit	Qual
Method:	E200.7							Analy	tical Run: ICP	203-B	_170511 <i>A</i>
Lab ID:	ICV	13 Co	ntinuing Cal	ibration Veri	fication Standa	rd				05/11	/17 13:24
Antimony			2.50	mg/L	0.050	100	95	105			
Barium			2.45	mg/L	0.10	98	95	105			
Beryllium			1.24	mg/L	0.010	99	95	105			
Boron			2.46	mg/L	0.10	99	95	105			
Cadmium			2.47	mg/L	0.010	99	95	105			
Calcium			25.8	mg/L	1.0	103	95	105			
Chromium			2.43	mg/L	0.050	97	95	105			
Cobalt			2.46	mg/L	0.020	98	95	105			
Lithium			1.30	mg/L	0.10	104	95	105			
Magnesiur	m		25.6	mg/L	1.0	102	95	105			
Molybdenu			2.50	mg/L	0.10	100	95	105			
Potassium			25.8	mg/L	1.0	103	95	105			
Sodium			25.8	mg/L	1.0	103	95	105			
Method:	E200.7									Bato	h: 109251
Lab ID:	MB-109251	12 Me	thod Blank				Run: ICP20	3-B 170511A			/17 22:59
Antimony		1010	ND	mg/L	0.02		11011.101 20	.o B_11001111		00/11	717 22.00
Barium			0.0006	mg/L	0.0005						
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Chromium			ND	mg/L	0.002						
Cobalt			ND	mg/L	0.005						
Lithium			ND	mg/L	0.004						
Magnesiur	m		ND	mg/L	0.01						
Molybdenu			ND	mg/L	0.007						
Potassium			ND	mg/L	0.07						
Sodium	•		ND	mg/L	0.03						
Method:	E200.7									Bato	h: 109252
Lab ID:	MB-109252	13 Ma	thod Blank				Pun: ICD20	3-B_170511A			/17 23:17
Antimony	100202	10 IVIE	ND	mg/L	0.02		IXUII. IOI 20	13-B_170311A		03/11	/11 25.11
Barium			ND	mg/L	0.0005						
Beryllium			ND	mg/L	0.0003						
Boron			ND	mg/L	0.0001						
Cadmium			ND	mg/L	0.003						
Calcium			ND		0.0010						
				mg/L							
Chromium			ND	mg/L	0.002						
Cobalt			ND	mg/L	0.005						
Lithium			ND	mg/L	0.004						
Magnesiur			ND	mg/L	0.01						
Molybdenu			ND	mg/L	0.007						
Potassium	1		ND	mg/L	0.07						
Sodium			0.03	mg/L	0.03						

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 05/31/17

Project: TMPA 6706150060

Work Order: B17050604

Analyte		Count F	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 109252
Lab ID:	LCS-109252	13 Labora	atory Cor	ntrol Sample			Run: ICP20	3-B_170511A		05/11/	17 23:27
Antimony			0.513	mg/L	0.10	103	85	115			
Barium			0.513	mg/L	0.10	103	85	115			
Beryllium			0.263	mg/L	0.010	105	85	115			
Boron			0.479	mg/L	0.10	96	85	115			
Cadmium			0.262	mg/L	0.010	105	85	115			
Calcium			26.4	mg/L	1.0	105	85	115			
Chromium			0.507	mg/L	0.050	101	85	115			
Cobalt			0.520	mg/L	0.050	104	85	115			
Lithium			0.522	mg/L	0.10	104	85	115			
Magnesiun	n		26.2	mg/L	1.0	105	85	115			
Molybdenu	ım		0.527	mg/L	0.10	105	85	115			
Potassium			26.0	mg/L	1.0	104	85	115			
Sodium			26.6	mg/L	1.0	106	85	115			
Lab ID:	B17050604-009BMS	3 13 Sampl	le Matrix	Spike			Run: ICP20	3-B_170511A		05/11/	17 23:41
Antimony			0.666	mg/L	0.21	133	70	130			S
Barium			0.527	mg/L	0.050	102	70	130			
Beryllium			0.359	mg/L	0.0014	106	70	130			
Boron			4.04	mg/L	0.050		70	130			Α
Cadmium			0.266	mg/L	0.0099	102	70	130			
Calcium			562	mg/L	1.0		70	130			Α
Chromium			0.484	mg/L	0.020	97	70	130			
Cobalt			0.722	mg/L	0.052	99	70	130			
Lithium			1.08	mg/L	0.10	115	70	130			
Magnesiun	n		144	mg/L	1.0		70	130			Α
Molybdenu	ım		0.552	mg/L	0.071	110	70	130			
Potassium			70.4	mg/L	1.0	109	70	130			
Sodium			718	mg/L	4.2		70	130			Α
Lab ID:	B17050604-009BMS	D 13 Sampl	le Matrix	Spike Duplicate			Run: ICP20	3-B_170511A		05/11/	17 23:45
Antimony			0.779	mg/L	0.21	156	70	130	16	20	S
Barium			0.530	mg/L	0.050	103	70	130	0.6	20	
Beryllium			0.363	mg/L	0.0014	107	70	130	1.2	20	
Boron			4.02	mg/L	0.050		70	130	0.3	20	Α
Cadmium			0.278	mg/L	0.0099	107	70	130	4.3	20	
Calcium			571	mg/L	1.0		70	130	1.6	20	Α
Chromium			0.525	mg/L	0.020	105	70	130	8.0	20	
Cobalt			0.727	mg/L	0.052	100	70	130	0.7	20	
Lithium			1.07	mg/L	0.10	114	70	130	0.5	20	
Magnesiun	n		147	mg/L	1.0		70	130	2.1	20	Α
Molybdenu	ım		0.511	mg/L	0.071	102	70	130	7.8	20	
Potassium			70.2	mg/L	1.0	109	70	130	0.2	20	
Sodium			726	mg/L	4.2		70	130	1.1	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

MDC - Minimum detectable concentration

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 05/31/17

Project: TMPA 6706150060 **Work Order**: B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.8							Analytical	Run: ICPMS206-B	_170511A
Lab ID:	QCS	11 Initial	Calibratio	on Verificati	on Standard				05/11	/17 22:04
Antimony			0.0457	mg/L	0.050	91	90	110		
Arsenic			0.0520	mg/L	0.0050	104	90	110		
Barium			0.0468	mg/L	0.10	94	90	110		
Beryllium			0.0234	mg/L	0.0010	94	90	110		
Cadmium			0.0255	mg/L	0.0010	102	90	110		
Chromium			0.0515	mg/L	0.010	103	90	110		
Cobalt			0.0485	mg/L	0.010	97	90	110		
Lead			0.0475	mg/L	0.010	95	90	110		
Molybdenu	ım		0.0454	mg/L	0.0050	91	90	110		
Selenium			0.0511	mg/L	0.0050	102	90	110		
Thallium			0.0484	mg/L	0.10	97	90	110		
Method:	E200.8								Bato	h: 109251
Lab ID:	MB-109251	11 Metho	d Blank				Run: ICPM	S206-B_170511A	05/12	2/17 02:53
Antimony			ND	mg/L	0.00004			_		
Arsenic			ND	mg/L	0.0002					
Barium		0	.00009	mg/L	0.00005					
Beryllium			ND	mg/L	0.00008					
Cadmium			ND	mg/L	0.00003					
Chromium			ND	mg/L	0.0001					
Cobalt		0	.00002	mg/L	0.00002					
Lead			ND	mg/L	0.00003					
Molybdenu	ım		ND	mg/L	0.00003					
Selenium			ND	mg/L	0.0004					
Thallium		0	.00004	mg/L	7E-06					
Lab ID:	LCS-109251	11 Labor	atory Cor	ntrol Sample	Э		Run: ICPM	S206-B_170511A	. 05/12	2/17 03:00
Antimony			0.452	mg/L	0.0010	90	85	_ 115		
Arsenic			0.477	mg/L	0.0010	95	85	115		
Barium			0.443	mg/L	0.050	89	85	115		
Beryllium			0.216	mg/L	0.0010	86	85	115		
Cadmium			0.239	mg/L	0.0010	95	85	115		
Chromium			0.452	mg/L	0.0050	91	85	115		
Cobalt			0.429	mg/L	0.0050	86	85	115		
Lead			0.438	mg/L	0.0010	88	85	115		
Molybdenu	ım		0.435	mg/L	0.0010	87	85	115		
Selenium			0.461	mg/L	0.0010	92	85	115		
Thallium			0.448	mg/L	0.00050	90	85	115		
Lab ID:	B17050604-001BMS3	11 Samp	le Matrix	Spike			Run: ICPM	S206-B_170511A	. 05/12	2/17 03:54
Antimony		·	0.476	mg/L	0.0010	95	70	130		
Arsenic			0.493	mg/L	0.0016	99	70	130		
Barium			0.496	mg/L	0.050	95	70	130		
Beryllium			0.236	mg/L	0.0010	94	70	130		
Cadmium			0.246	mg/L	0.0010	97	70	130		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Revised Date: 12/21/17

QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/31/17Project:TMPA 6706150060Work Order:B17050604

	Count F	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
E200.8									Batc	h: 109251
B17050604-001BMS3	11 Sampl	e Matrix	Spike			Run: ICPM	S206-B_170511	4	05/12	/17 03:54
		0.497	mg/L	0.0050	99	70	130			
		0.486	mg/L	0.0050	94	70	130			
		0.469	mg/L	0.0010	94	70	130			
m		0.473	mg/L	0.0010	94	70	130			
		0.454	mg/L	0.0036	91	70	130			
		0.467	mg/L	0.00050	93	70	130			
B17050604-001BMSE	11 Sampl	e Matrix	Spike Dup	licate		Run: ICPM	S206-B_170511/	4	05/12	/17 03:57
		0.459	mg/L	0.0010	92	70	130	3.6	20	
		0.529	mg/L	0.0016	106	70	130	7.0	20	
		0.473	mg/L	0.050	90	70	130	4.8	20	
		0.220	mg/L	0.0010	87	70	130	6.9	20	
		0.241	mg/L	0.0010	96	70	130	1.7	20	
		0.462	mg/L	0.0050	92	70	130	7.1	20	
		0.465		0.0050	90	70	130	4.5	20	
		0.443		0.0010	89	70	130	5.7	20	
m		0.452		0.0010	90	70	130	4.5	20	
		0.467		0.0036	93	70	130	3.0	20	
		0.444	mg/L	0.00050	89	70	130	5.1	20	
E200.8									Batc	h: 109252
MB-109252	10 Metho	d Blank				Run: ICPM	S206-B_170511	4	05/12	/17 04:57
		ND	mg/L	0.00004						
		ND	mg/L	0.0002						
		ND	mg/L	0.00008						
		ND	mg/L	0.00003						
		ND	mg/L	0.0001						
		ND	mg/L	0.00002						
		ND	mg/L	0.00003						
m		ND		0.00003						
		ND	mg/L	0.0004						
	0.	00002	mg/L	7E-06						
LCS-109252	10 Labora	atory Cor	ntrol Samp	le		Run: ICPM	S206-B_170511/	A	05/12	/17 05:04
		0.458	mg/L	0.0010	92	85	115			
		0.494	mg/L	0.0010	99	85	115			
		0.216	mg/L	0.0010	87	85	115			
		0.244	mg/L	0.0010	97	85	115			
		0.473	mg/L	0.0050	95	85	115			
		0.443	mg/L	0.0050	89	85	115			
		0.454	mg/L	0.0010	91	85	115			
m		0.449		0.0010	90	85	115			
		0.475	mg/L	0.0010	95	85	115			
	m B17050604-001BMS0 m E200.8 MB-109252	E200.8 B17050604-001BMSD 11 Sample m E200.8 MB-109252 10 Method LCS-109252 10 Labora	E200.8 B17050604-001BMS3 11 Sample Matrix	B17050604-001BMS3			Mathematical Parison	Page Page	Mathematical Note	Page Page

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/21/17 **Report Date:** 05/31/17

Project: TMPA 6706150060

Work Order: B17050604 RL %REC Low Limit High Limit RPD RPDI imit Qual

Analyte		Count Re	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	h: 109252
Lab ID:	B17050604-009BMS3	10 Sample	Matrix	x Spike			Run: ICPM	S206-B_170511 <i>A</i>	١	05/12/	17 05:08
Antimony		C	.454	mg/L	0.0010	91	70	130			
Arsenic		C	.477	mg/L	0.0010	90	70	130			
Beryllium		C	.292	mg/L	0.0010	86	70	130			
Cadmium		C).241	mg/L	0.0010	93	70	130			
Chromium		C).451	mg/L	0.0050	90	70	130			
Cobalt		C	0.610	mg/L	0.0050	89	70	130			
Lead		C	.449	mg/L	0.0010	89	70	130			
Molybdenu	um	C).447	mg/L	0.0010	89	70	130			
Selenium		C	.485	mg/L	0.0018	95	70	130			
Thallium		C).449	mg/L	0.00050	89	70	130			
Lab ID:	B17050604-009BMSE	10 Sample	Matrix	x Spike Duplic	cate		Run: ICPM	S206-B_170511 <i>F</i>	\	05/12/	17 05:11
Antimony		C).482	mg/L	0.0010	96	70	130	6.0	20	
Arsenic		C).516	mg/L	0.0010	98	70	130	8.0	20	
Beryllium		C	0.308	mg/L	0.0010	93	70	130	5.6	20	
Cadmium		C).240	mg/L	0.0010	92	70	130	0.1	20	
Chromium		C).478	mg/L	0.0050	95	70	130	5.9	20	
Cobalt		C).646	mg/L	0.0050	97	70	130	5.9	20	
Lead).465	mg/L	0.0010	93	70	130	3.5	20	
Molybdenu	ım).474	mg/L	0.0010	95	70	130	5.8	20	
Selenium		C).498	mg/L	0.0018	97	70	130	2.5	20	
Thallium		C).465	mg/L	0.00050	93	70	130	3.6	20	
Lab ID:	B17050631-001AMS3	10 Sample	Matrix	x Spike			Run: ICPM	S206-B_170511 <i>A</i>	١.	05/12/	17 05:48
Antimony).459	mg/L	0.0010	92	70	130			
Arsenic).497	mg/L	0.0010	99	70	130			
Beryllium).211	mg/L	0.0010	85	70	130			
Cadmium).243	mg/L	0.0010	97	70	130			
Chromium).462	mg/L	0.0050	92	70	130			
Cobalt).435	mg/L	0.0050	87	70	130			
Lead).454	mg/L	0.0010	91	70	130			
Molybdenu	um).446	mg/L	0.0010	89	70	130			
Selenium).475	mg/L	0.0010	95	70	130			
Thallium		C).459	mg/L	0.00050	92	70	130			
Lab ID:	B17050631-001AMSE							S206-B_170511 <i>A</i>			17 05:51
Antimony).457	mg/L	0.0010	91	70	130	0.3	20	
Arsenic).506	mg/L	0.0010	101	70	130	1.7	20	
Beryllium).212	mg/L	0.0010	85	70	130	0.0	20	
Cadmium).239	mg/L	0.0010	96	70	130	1.8	20	
Chromium).467	mg/L	0.0050	93	70	130	1.1	20	
Cobalt).437	mg/L	0.0050	87	70	130	0.4	20	
Lead).450	mg/L	0.0010	90	70	130	0.7	20	
Molybdenu	um).444	mg/L	0.0010	89	70	130	0.6	20	
Selenium		C).483	mg/L	0.0010	97	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Client:

Project: TMPA 6706150060

QA/QC Summary Report

Prepared by Billings, MT Branch

Revised Date: 12/21/17 Texas Municipal Power Agency **Report Date:** 05/31/17 Work Order: B17050604

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	h: 10925
Lab ID:	B17050631-001AMSE	10 S	ample Matrix	Spike Dupli	cate		Run: ICPMS	S206-B_170511	Α	05/12/	17 05:51
Thallium			0.464	mg/L	0.00050	93	70	130	1.0	20	
Method:	E200.8							Analytica	al Run: I	CPMS206-B	_170512/
Lab ID:	QCS	4 In	nitial Calibratio	n Verification	on Standard					05/13/	17 00:39
Antimony			0.0494	mg/L	0.050	99	90	110			
Beryllium			0.0248	mg/L	0.0010	99	90	110			
Cobalt			0.0513	mg/L	0.010	103	90	110			
Molybdenu	m		0.0473	mg/L	0.0050	95	90	110			
Lab ID:	QCS	4 In	nitial Calibratio	n Verificatio	on Standard					05/13/	17 06:00
Antimony			0.0492	mg/L	0.050	98	90	110			
Beryllium			0.0255	mg/L	0.0010	102	90	110			
Cobalt			0.0522	mg/L	0.010	104	90	110			
Molybdenu	m		0.0481	mg/L	0.0050	96	90	110			
Method:	E200.8									Batcl	h: 10925
Lab ID:	MB-109251	4 M	lethod Blank				Run: ICPM	S206-B_170512	Α	05/13/	/17 11:41
Antimony			ND	mg/L	0.00004						
Beryllium			ND	mg/L	0.00008						
Cobalt			ND	mg/L	0.00002						
Molybdenu	m		ND	mg/L	0.00003						
Method:	E200.8									Batcl	h: 10925
Lab ID:	MB-109252	4 M	lethod Blank				Run: ICPMS	S206-B 170512	Α	05/13/	17 02:21
Antimony			ND	mg/L	0.00004			_			
Beryllium			ND	mg/L	0.00008						
Cobalt			ND	mg/L	0.00002						
Molybdenu	m		ND	mg/L	0.00003						

Revised Date: 12/21/17



QA/QC Summary Report

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B_	170508A
Lab ID:	ICV	Initia	al Calibratio	n Verifica	ition Standard					05/08/	17 14:18
Mercury			0.00216	mg/L	0.00010	108	90	110			
Method:	E245.1									Batch	n: 109273
Lab ID:	MB-109273	Meth	hod Blank				Run: HGC\	/202-B_170508A		05/08/	17 15:43
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-109273	Labo	oratory Cor	ntrol Samp	ole		Run: HGC\	/202-B_170508A		05/08/	17 15:45
Mercury			0.00224	mg/L	0.00010	112	85	115			
Lab ID:	B17050467-001BMS	Sam	nple Matrix	Spike			Run: HGC\	/202-B_170508A		05/08/	17 15:48
Mercury			0.00377	mg/L	0.00010	89	70	130			
Lab ID:	B17050467-001BMS	D Sam	nple Matrix	Spike Du	plicate		Run: HGC\	/202-B_170508A		05/08/	17 15:50
Mercury			0.00375	mg/L	0.00010	89	70	130	0.3	30	
Lab ID:	B17050604-013BMS	Sam	nple Matrix	Spike			Run: HGC\	/202-B_170508A		05/08/	17 16:49
Mercury			0.00208	mg/L	0.00010	104	70	130			
Lab ID:	B17050604-013BMS	D Sam	nple Matrix	Spike Du	plicate		Run: HGC\	/202-B_170508A		05/08/	17 16:51
Mercury			0.00209	mg/L	0.00010	104	70	130	0.3	30	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Tabitha Edwards

B17050604

Date Received: 5/5/2017

9					
Reviewed by:	BL2000\lcadreau		Re	eceived by: qej	
Reviewed Date:	5/9/2017		Ca	rrier name: Return-UPS NDA	
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes ✓	No 🗌		
Chain of custody signed wh	en relinquished and received?	Yes ✓	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes ✓	No 🗌		
Samples in proper container	/bottle?	Yes ✓	No 🗌		
Sample containers intact?		Yes ✓	No 🗌		
Sufficient sample volume fo	r indicated test?	Yes ✓	No 🗌		
All samples received within (Exclude analyses that are c such as pH, DO, Res Cl, Sc	considered field parameters	Yes ✓	No 🗌		
Temp Blank received in all s	shipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable	
Container/Temp Blank temp	erature:	°C On Ice			
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted ✓	
Water - pH acceptable upon	receipt?	Yes 🗹	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 0.8°C, shipping container 2 was 0.8°C, shipping container 3 was 0.5°C and shipping container 4 was 1.8°C.

All containers for samples SSP-MW-4, SSP-MW-3, EQBK-SCM-050417 and only the 2-2 Liter Plastic Nitric preserved containers for SSP-MW-2 were not received with this shipment. One cooler was lost in transit. Greg Seifert was notified. Proceeded with analysis on all other samples received per Shari Endy, Energy Laboratories Project Manager.



Chain of Custody & Analytical Request Record

Page of A

Account Information (Billing information)	Report Information #	Report Information (if different then Account Information)	Comments	ents
CompanyiName Line Foster Liberier	Company/Name			
1 0	Contact			
Phone 512-795-0360	Phone			
Mailing Address 3755 S. (2012 of TX Hwy, #375	Mailing Address		_	
City, State, Zip Austin, TX 18704	City, State, Zip			
1 2	Email			
Receive Invoice □Hard Copy XEmail Receive Report □Hard Copy XEmail	Receive Report	□Email		
Purchase Order Quote Bottle Order	Special Report/Formats: ☐ LEVEL IV ☐ NELAC ☐ E	□ EDD/EDT (contact laboratory) □ Other		
Project Information	Matrix Codes	Analysis Requested		All turnaround times are
Project Name, PWSID, Permit, etc. TMPA 6706/150060	W. Water			standard unless marked as RUSH.
Sampler Name Brian Gieselman Sampler Phone 512-241-2321	S Solids V - Vegetation			Energy Laboratories
	B · Bioassay	3	pau	RUSH sample submittal for
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. "If ne has been processed or refined, call before sending. In Burnachurt 11 (a)2 material Unprocessed ore (NOT ground or refined)*	DW - Drinking DW - Water	npal	lostfA	Charges and scheduling See Instructions Page
			99	
Sample Identification (Name, Location, Interval, etc.) Date	Number of See Codes Containers (See Codes Above)	5	S	δ <u> </u>
1 SFL MW-2 5/3/17 1006	<u>т</u> Х	×		100 - RODUCA 110
2 SFL MW-5				100
3 SSP/APMW-1 1420				
				100
5 SSP MW-2			<u>-</u>	
7 EQBK-5CM-160317 V 1650			+	
8 APMW-1D 5/4/17 0857				Comment Poly
•				I'M WILLIAM
>	> >	->		
Reinquished by (print) Date Time Sign	Signature	Received by (print)	STSTIT OGS	Signature
Dis.	Signature	Received by Laboratory (print)	Data/Time	Signature
	A MORATORY LISE ONLY		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A STATE OF THE STA
Shipped By Cooler ID(s) Custody Seals Intact Receipt Temp	Ĭ _E ≻	Payment Type CC Cash Check	Amount Rec	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This canas as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1



Chain of Custody & Analytical Request Record

Page 2 of 2

Account Information (Billing information)		Report Information	Keport Intormation (if different than Account Information)	Comments	51115
Company/Name Amec Foster Wheeler		Company/Name			
Contact Grea Seitert		Contact			
Phone 512-745-0360		Phone			
Mailing Address 3755 S. Capital of TX Hoy, #375	wx, #375	Mailing Address			
City, State, Zip Austin, TX 78704		City, State, Zip			
Email greg. Sefert Damecto, com		Email			
Receive Invoice	ort □Hard Copy 🕅 mail	Receive Report	y Clemail		
Purchase Order Quote	Bottle Order	Special Report/Formats:	□ EDD/EDT (contact laboratory) □ Other		
Project Information		Matrix Codes	Analysis Requested		
I, etc. TMPA	6706/150060	A - Air W - Water			All turnaround times are standard unless marked as
Sampler Name BG/SM Sampler Phone	Sampler Phone 512-241-232(S - Solis/ Solids	}		RUSH. Energy Laboratories
X	mpliance Yes 🗆 No	B - Bioassay	, 9	pe	MUST be contacted prior to RUSH sample submittal for
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. □ Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)*	OT ground or refined)*	Dw Drinking Dw Water	vedu	hostiA	charges and scheduling – See instructions Page
entifi	Collection Date Time	Number of Matrix Containers (See Codes	125		RUSH EN CABID
1 SSP MW-3	1	7 X	X	Kereinaa	BNSWedt.
2 EARK-SCM-050417	-	-	104	Redelived	
3 AP MW-H	1256			#E 5917	BITASSIACH - CHO
4 DWP-2					
5 DWP-3	1				210
· EQBK-BJG-50417	V 1354	→	->		7 0/3
o o					
10					
Custody Reinquished by (print)	Date/Time Signs	Signature Bin 12.46	Received by (print)	7 09:50	Signature
Relinquished by (print)		ature	(print)		Signature
		LABORATORY USE ONLY	**************************************		
Shipped By Cooler ID(s) Custody Seals	Intact Receipt Temp	np Temp Blank On loa	Payment Type CC Cash Check	Amount Recei	Kecelpt Number <i>(cash/cneck dility)</i>

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17050949 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 4 samples for Texas Municipal Power Agency on 5/10/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17050949-001	SSP-MW-4	05/04/17 9:55 05/10/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17050949-002	SSP-MW-3	05/04/17 11:25 05/10/17	Ground Water	Same As Above
B17050949-003	EQBK-SCM-050417	05/04/17 12:55 05/10/17	Ground Water	Same As Above
B17050949-004	SSP-MW-2	05/03/17 15:45 05/10/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 05/31/17

 Project:
 TMPA 6706150060
 Report Date: 05/31/17

 Work Order:
 B17050949
 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised 7/26/2017:

CLIENT:

Per Brian Gieselman on 7/24/17, change Sample ID on B17050949-003 to EQBK-SCM-050417.

The report has been revised and replaces any previously issued report in its entirety.

Revised Report 12/21/2017

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte	Original Reporting Limit (mg/L)	Revised Reporting limit (mg/L)
Antimony	0.05	0.006
Cadmium	0.01	0.005
Thallium	0.01	0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050949-001

 Client Sample ID:
 SSP-MW-4

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/04/17 09:55
DateReceived: 05/10/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	455	mg/L		1		E200.7	05/15/17 18:07 / rlh
Magnesium		mg/L		1		E200.7	05/15/17 18:07 / rlh
Potassium		mg/L		1		E200.7	05/16/17 19:19 / rlh
Sodium		mg/L	D	4		E200.7	05/16/17 19:19 / rlh
PHYSICAL PROPERTIES							
рН	6.5	s.u.	Н	0.1		A4500-H B	05/10/17 14:12 / pjw
Solids, Total Dissolved TDS @ 180 C	3990	mg/L		10		A2540 C	05/10/17 15:16 / mnh
INORGANICS							
Chloride	1120	mg/L	D	6		E300.0	05/12/17 03:28 / cjm
Sulfate	1180	mg/L	D	20		E300.0	05/12/17 03:28 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	05/16/17 10:13 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 09:33 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/13/17 09:33 / jpv
Barium	0.03	mg/L		0.01		E200.8	05/13/17 09:33 / jpv
Beryllium	ND	mg/L		0.001		E200.8	05/13/17 09:33 / jpv
Boron	1.47	mg/L		0.05		E200.7	05/15/17 18:07 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/13/17 09:33 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/13/17 09:33 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/13/17 09:33 / jpv
Lead	ND	mg/L		0.01		E200.8	05/13/17 09:33 / jpv
Lithium	0.87	mg/L	D	0.04		E200.7	05/16/17 19:19 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/12/17 12:37 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 09:33 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/13/17 09:33 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/13/17 09:33 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.2	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	0.30	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228	3.3	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228	4.4	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Minimum data at all a server

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050949-002

 Client Sample ID:
 SSP-MW-3

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/04/17 11:25
DateReceived: 05/10/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesuit	Units	Qualifiers	INE.	QUL	Wiethou	Allalysis Date / Dy
MAJOR IONS							
Calcium	694	mg/L		1		E200.7	05/16/17 19:23 / rlh
Magnesium	176	mg/L		1		E200.7	05/16/17 19:23 / rlh
Potassium	47	mg/L		1		E200.7	05/16/17 19:23 / rlh
Sodium	1050	mg/L	D	4		E200.7	05/16/17 19:23 / rlh
PHYSICAL PROPERTIES							
pH	4.5	s.u.	Н	0.1		A4500-H B	05/10/17 14:17 / pjw
Solids, Total Dissolved TDS @ 180 C	6670	mg/L	D	100		A2540 C	05/10/17 13:46 / mnh
INORGANICS							
Chloride	1860	mg/L	D	6		E300.0	05/12/17 04:27 / cjm
Sulfate	2380	mg/L	D	20		E300.0	05/12/17 04:27 / cjm
Fluoride	0.7	mg/L		0.1		A4500-F C	05/16/17 10:20 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/13/17 09:36 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/13/17 09:36 / jpv
Barium	0.03	mg/L		0.01		E200.8	05/13/17 09:36 / jpv
Beryllium	0.120	mg/L		0.001		E200.8	05/13/17 09:36 / jpv
Boron	2.24	mg/L		0.05		E200.7	05/16/17 19:23 / rlh
Cadmium	0.081	mg/L		0.005		E200.8	05/13/17 09:36 / jpv
Chromium		mg/L		0.01		E200.8	05/13/17 09:36 / jpv
Cobalt	0.62	mg/L		0.02		E200.8	05/13/17 09:36 / jpv
Lead	ND	mg/L		0.01		E200.8	05/13/17 09:36 / jpv
Lithium	0.61	mg/L	D	0.04		E200.7	05/16/17 19:23 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/12/17 12:39 / mas
Molybdenum	ND	mg/L		0.05		E200.8	05/13/17 09:36 / jpv
Selenium		mg/L		0.01		E200.8	05/13/17 09:36 / jpv
Thallium	0.010	mg/L		0.002		E200.8	05/13/17 09:36 / jpv
RADIONUCLIDES - TOTAL							
Radium 226		pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	1.2	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228	17	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC		pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17050949-003

 Client Sample ID:
 EQBK-SCM-050417

Revised Date: 12/21/17
Report Date: 05/31/17
Collection Date: 05/04/17 12:55
DateReceived: 05/10/17

Matrix: Ground Water

					MCL/		
Analyses	Result U	Inits	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND m	ng/L		1		E200.7	05/16/17 19:26 / rlh
Magnesium	ND m	-		1		E200.7	05/16/17 19:26 / rlh
Potassium	ND m	ng/L		1		E200.7	05/16/17 19:26 / rlh
Sodium	ND m	ng/L		1		E200.7	05/16/17 19:26 / rlh
PHYSICAL PROPERTIES							
pH	5.4 s	.u.	Н	0.1		A4500-H B	05/10/17 14:20 / pjw
Solids, Total Dissolved TDS @ 180 C	ND m	ng/L		10		A2540 C	05/10/17 13:46 / mnh
INORGANICS							
Chloride	ND m	ng/L		1		E300.0	05/12/17 04:46 / cjm
Sulfate	ND m	ng/L		1		E300.0	05/12/17 04:46 / cjm
Fluoride	ND m	ng/L		0.1		A4500-F C	05/16/17 10:27 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND m	ng/L		0.006		E200.8	05/13/17 09:40 / jpv
Arsenic	ND m	ng/L		0.01		E200.8	05/13/17 09:40 / jpv
Barium	ND m	ng/L		0.01		E200.8	05/13/17 09:40 / jpv
Beryllium	ND m	ng/L		0.001		E200.8	05/13/17 09:40 / jpv
Boron	ND m	ng/L		0.05		E200.7	05/16/17 19:26 / rlh
Cadmium	ND m	ng/L		0.005		E200.8	05/13/17 09:40 / jpv
Chromium	ND m	ng/L		0.01		E200.8	05/13/17 09:40 / jpv
Cobalt	ND m	ng/L		0.02		E200.8	05/13/17 09:40 / jpv
Lead	ND m	ng/L		0.01		E200.8	05/13/17 09:40 / jpv
Lithium	ND m	ng/L		0.01		E200.7	05/16/17 19:26 / rlh
Mercury	ND m	ng/L		0.001		E245.1	05/12/17 12:41 / mas
Molybdenum	ND m	ng/L		0.05		E200.8	05/13/17 09:40 / jpv
Selenium	ND m	ng/L		0.01		E200.8	05/13/17 09:40 / jpv
Thallium	ND m	ng/L		0.002		E200.8	05/13/17 09:40 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.12 p	Ci/L	U			E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	0.11 p	Ci/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.19 p	Ci/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228	1.9 p	Ci/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 precision (±)	0.88 p	Ci/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC	1.4 p	Ci/L				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228	2.0 p	Ci/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9 p	Ci/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.4 p	Ci/L				A7500-RA	05/31/17 11:00 / eli-ca

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17050949-004 Client Sample ID: SSP-MW-2

Revised Date: 12/21/17 **Report Date:** 05/31/17 Collection Date: 05/03/17 15:45 DateReceived: 05/10/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.72	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 precision (±)	0.22	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 226 MDC	0.24	pCi/L				E903.0	05/30/17 13:27 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	05/24/17 12:03 / eli-ca
Radium 228 precision (±)	0.82	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	05/24/17 12:03 / eli-ca
Radium 226 + Radium 228	2.1	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	05/31/17 11:00 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Prepared by Billings, MT Branch

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch	h: 109384
Lab ID: MB-109384	Me	thod Blank				Run: BAL#	SD-15_170510C		05/10/	17 13:43
Solids, Total Dissolved TDS @ 18	80 C	ND	mg/L	4						
Lab ID: LCS-109384	Lat	boratory Cor	ntrol Sample			Run: BAL #	SD-15_170510C		05/10/	17 13:43
Solids, Total Dissolved TDS @ 18	80 C	986	mg/L	10	98	90	110			
Lab ID: B17050949-001A DU	P Sa	mple Duplica	ate			Run: BAL#	SD-15_170510C		05/10/	17 13:45
Solids, Total Dissolved TDS @ 18	80 C	4000	mg/L	10						

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	_170516A
Lab ID:	ICV	Initia	al Calibration	on Verification S	Standard					05/16/	17 09:56
Fluoride			1.00	mg/L	0.10	100	90	110			
Method:	A4500-F C									Batch:	R279985
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170516A		05/16/	17 09:51
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_170516A		05/16/	17 09:53
Fluoride			1.02	mg/L	0.10	102	90	110			
Lab ID:	B17050867-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH_170516A		05/16/	17 10:01
Fluoride			4.65	mg/L	0.10	98	80	120			
Lab ID:	B17050867-001AMSI	D San	nple Matrix	Spike Duplicate	е		Run: MAN-	TECH_170516A		05/16/	17 10:04
Fluoride			4.70	mg/L	0.10	103	80	120	1.1	10	

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: PF	HSC _101-B_	_170510A
Lab ID:	pH 8	Initi	al Calibratio	n Verificat	tion Standard					05/10/	/17 10:00
рН			7.98	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cal	bration Ve	erification Standa	rd				05/10/	/17 13:31
рН			7.03	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R279606
Lab ID:	B17050949-001ADUF	S an	nple Duplica	ate			Run: PHSC	_101-B_17051	I0A	05/10/	/17 14:15
рН			6.50	s.u.	0.10				0.0	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

Qual	RPDLimit	RPD	High Limit	Low Limit	%REC	RL	Units	Result	Count		Analyte
	n: ICP203-B_	ytical Rur	Analy							E200.7	Method:
5/17 12:13	05/15/				d	on Standar	bration Verifica	ntinuing Cali	3 Cor	ICV	Lab ID:
			105	95	102	0.10	mg/L	2.55			Boron
			105	95	104	1.0	mg/L	26.0			Calcium
			105	95	104	1.0	mg/L	26.0			Magnesium
ch: 109388	Batcl									E200.7	Method:
5/17 17:43	05/15/		-B_170515A	Run: ICP20				thod Blank	6 Me	MB-109388	Lab ID:
						0.003	mg/L	ND			Boron
						0.08	mg/L	ND			Calcium
						0.004	mg/L	ND			Lithium
						0.01	mg/L	ND			Magnesium
						0.07	mg/L	ND			Potassium
						0.03	mg/L	ND			Sodium
5/17 17:46	05/15/		-B_170515A	Run: ICP20			itrol Sample	ooratory Cor	6 Lab	LCS-109388	Lab ID:
			115	85	103	0.10	mg/L	0.517			Boron
			115	85	114	1.0	mg/L	28.5			Calcium
			115	85	113	0.10	mg/L	0.566			Lithium
			115	85	114	1.0	mg/L	28.5			Magnesium
			115	85	113	1.0	mg/L	28.2			Potassium
			115	85	111	1.0	mg/L	27.8			Sodium
5/17 18:00	05/15/		-B_170515A	Run: ICP20			Spike	mple Matrix	6 Sar	B17050928-001BMS3	Lab ID:
			130	70	124	0.050	mg/L	1.85			Boron
Α			130	70		1.0	mg/L	219			Calcium
			130	70	123	0.10	mg/L	0.816			Lithium
S			130	70	131	1.0	mg/L	90.0			Magnesium
			130	70	120	1.0	mg/L	63.8			Potassium
Α			130	70		2.1	mg/L	467			Sodium
5/17 18:04	05/15/		-B_170515A	Run: ICP20			Spike Duplicate	mple Matrix	6 Sar	B17050928-001BMSD	Lab ID:
	20	6.5	130	70	100	0.050	mg/L	1.73			Boron
Α	20	6.7	130	70		1.0	mg/L	204			Calcium
	20	7.7	130	70	111	0.10	mg/L	0.755			Lithium
	20	7.4	130	70	105	1.0	mg/L	83.6			Magnesium
	20	5.6	130	70	106	1.0	mg/L	60.4			Potassium
Α	20	5.4	130	70		2.1	mg/L	442			Sodium

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Ru	n: ICP203-B	_170516E
Lab ID:	ICV	6 Co	ntinuing Cal	ibration Verifi	cation Standa	rd				05/16	/17 11:01
Boron			2.49	mg/L	0.10	100	95	105			
Calcium			24.9	mg/L	1.0	100	95	105			
Lithium			1.24	mg/L	0.10	100	95	105			
Magnesiur	m		24.8	mg/L	1.0	99	95	105			
Potassium	1		24.8	mg/L	1.0	99	95	105			
Sodium			24.9	mg/L	1.0	100	95	105			
Method:	E200.7									Batc	h: 109388
Lab ID:	MB-109388	6 Me	thod Blank				Run: ICP20	3-B_170516B		05/16	/17 19:16
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiu	m		ND	mg/L	0.01						
Potassium	1		ND	mg/L	0.07						
Sodium			0.04	mg/L	0.03						

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	l Run: I	CPMS206-B	_170512A
Lab ID:	QCS	11 Initial	l Calibratio	on Verificatio	n Standard					05/13	/17 06:00
Antimony			0.0492	mg/L	0.050	98	90	110			
Arsenic			0.0551	mg/L	0.0050	110	90	110			
Barium			0.0497	mg/L	0.10	99	90	110			
Beryllium			0.0255	mg/L	0.0010	102	90	110			
Cadmium			0.0258	mg/L	0.0010	103	90	110			
Chromium			0.0516	mg/L	0.010	103	90	110			
Cobalt			0.0522	mg/L	0.010	104	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Molybdenu	ım		0.0481	mg/L	0.0050	96	90	110			
Selenium			0.0505	mg/L	0.0050	101	90	110			
Thallium			0.0500	mg/L	0.10	100	90	110			
Method:	E200.8									Batc	h: 109388
Lab ID:	MB-109388	11 Meth	od Blank				Run: ICPM	S206-B_170512A	A	05/12	/17 19:08
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	ım		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium		(0.00002	mg/L	7E-06						
Lab ID:	B17042380-002CMS3	11 Sam	ple Matrix	Spike			Run: ICPM	S206-B_170512 <i>F</i>	Ą	05/12	/17 19:14
Antimony			0.470	mg/L	0.0010	94	70	130			
Arsenic			0.496	mg/L	0.0010	99	70	130			
Barium			0.484	mg/L	0.050	95	70	130			
Beryllium			0.238	mg/L	0.0010	95	70	130			
Cadmium			0.245	mg/L	0.0010	95	70	130			
Chromium			0.451	mg/L	0.0050	90	70	130			
Cobalt			0.464	mg/L	0.0050	93	70	130			
Lead			0.476	mg/L	0.0010	94	70	130			
Molybdenu	m		0.452	mg/L	0.0010	90	70	130			
Selenium			0.464	mg/L	0.0010	93	70	130			
Thallium			0.495	mg/L	0.00050	99	70	130			
Lab ID:	B17042380-002CMSE) 11 Sam	ple Matrix	Spike Duplic	cate		Run: ICPM	S206-B_170512 <i>F</i>	A	05/12	/17 19:18
Antimony			0.478	mg/L	0.0010	96	70	130	1.6	20	
Arsenic			0.496	mg/L	0.0010	99	70	130	0.1	20	
Barium			0.482	mg/L	0.050	95	70	130	0.4	20	
Beryllium			0.232	mg/L	0.0010	93	70	130	2.3	20	
-			0.244	mg/L	0.0010	94	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 109388
Lab ID:	B17042380-002CMSI	D 11 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_17051	2A	05/12/	17 19:18
Chromium			0.466	mg/L	0.0050	93	70	130	3.4	20	
Cobalt			0.455	mg/L	0.0050	91	70	130	2.1	20	
Lead			0.471	mg/L	0.0010	93	70	130	1.0	20	
Molybdenu	m		0.463	mg/L	0.0010	93	70	130	2.5	20	
Selenium			0.460	mg/L	0.0010	92	70	130	8.0	20	
Thallium			0.477	mg/L	0.00050	95	70	130	3.7	20	
Lab ID:	B17050928-001BMS3	3 11 Sa	mple Matrix	Spike			Run: ICPM	S206-B_17051	2A	05/13/	17 08:56
Antimony			0.503	mg/L	0.0010	101	70	130			
Arsenic			0.552	mg/L	0.0010	110	70	130			
Barium			0.825	mg/L	0.050	165	70	130			S
Beryllium			0.243	mg/L	0.0010	97	70	130			
Cadmium			0.247	mg/L	0.0010	99	70	130			
Chromium			0.488	mg/L	0.0050	98	70	130			
Cobalt			0.496	mg/L	0.0050	99	70	130			
Lead			0.514	mg/L	0.0010	103	70	130			
Molybdenu	m		0.547	mg/L	0.0010	109	70	130			
Selenium			0.500	mg/L	0.0010	100	70	130			
Thallium			0.478	mg/L	0.00050	96	70	130			
Lab ID:	B17050928-001BMSI	D 11 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_17051	2A	05/13/	17 09:09
Antimony			0.509	mg/L	0.0010	102	70	130	1.2	20	
Arsenic			0.539	mg/L	0.0010	108	70	130	2.3	20	
Barium			0.840	mg/L	0.050	168	70	130	1.8	20	S
Beryllium			0.247	mg/L	0.0010	99	70	130	1.8	20	
Cadmium			0.252	mg/L	0.0010	101	70	130	2.0	20	
Chromium			0.476	mg/L	0.0050	95	70	130	2.6	20	
Cobalt			0.502	mg/L	0.0050	100	70	130	1.2	20	
Lead			0.518	mg/L	0.0010	104	70	130	0.9	20	
Molybdenu	m		0.551	mg/L	0.0010	110	70	130	8.0	20	
Selenium			0.503	mg/L	0.0010	101	70	130	0.7	20	
Thallium			0.484	mg/L	0.00050	97	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

S - Spike recovery outside of advisory limits.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

<u> </u>	TWPA 6706150060									. 61705094	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 109388
Lab ID:	MB-109388	11 Me	thod Blank				Run: ICPM	S206-B_170515 <i>i</i>	١.	05/15/	17 14:56
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	ım		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.00002	mg/L	7E-06						
Lab ID:	LCS-109388	11 Lal	ooratory Co	ntrol Sample			Run: ICPM	S206-B_170515A	4	05/15/	17 15:03
Antimony			0.510	mg/L	0.0010	102	85	115			
Arsenic			0.532	mg/L	0.0010	106	85	115			
Barium			0.526	mg/L	0.050	105	85	115			
Beryllium			0.265	mg/L	0.0010	106	85	115			
Cadmium			0.267	mg/L	0.0010	107	85	115			
Chromium			0.531	mg/L	0.0050	106	85	115			
Cobalt			0.509	mg/L	0.0050	102	85	115			
Lead			0.519	mg/L	0.0010	104	85	115			
Molybdenu	ım		0.501	mg/L	0.0010	100	85	115			
Selenium			0.507	mg/L	0.0010	101	85	115			
Thallium			0.519	mg/L	0.00050	104	85	115			
Lab ID:	B17042380-002CMS	3 11 Sa	mple Matrix	Spike			Run: ICPM	S206-B_170515A	٨	05/15/	17 15:06
Antimony			0.510	mg/L	0.0010	102	70	130			
Arsenic			0.522	mg/L	0.0010	104	70	130			
Barium			0.529	mg/L	0.050	104	70	130			
Beryllium			0.255	mg/L	0.0010	102	70	130			
Cadmium			0.267	mg/L	0.0010	103	70	130			
Chromium			0.508	mg/L	0.0050	101	70	130			
Cobalt			0.502	mg/L	0.0050	100	70	130			
Lead			0.514	mg/L	0.0010	102	70	130			
Molybdenu	ım		0.497	mg/L	0.0010	99	70	130			
Selenium			0.506	mg/L	0.0010	101	70	130			
Thallium			0.507	mg/L	0.00050	101	70	130			
Lab ID:	B17042380-002CMSI	D 11 Sa	mple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_170515A	٨	05/15/	17 15:09
Antimony			0.515	mg/L	0.0010	103	70	130	8.0	20	
Arsenic			0.500	mg/L	0.0010	100	70	130	4.3	20	
Barium			0.525	mg/L	0.050	103	70	130	0.9	20	
Beryllium			0.251	mg/L	0.0010	100	70	130	1.5	20	
-			0.264	mg/L	0.0010	102	70	130	1.1	20	
Cadmium			0.207	mg/L	0.0010	102		100		20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	h: 109388
Lab ID:	B17042380-002CMSE	1 1 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_17051	5A	05/15/	17 15:09
Cobalt			0.496	mg/L	0.0050	99	70	130	1.1	20	
Lead			0.510	mg/L	0.0010	101	70	130	8.0	20	
Molybdenu	ım		0.504	mg/L	0.0010	101	70	130	1.6	20	
Selenium			0.501	mg/L	0.0010	100	70	130	1.0	20	
Thallium			0.504	mg/L	0.00050	101	70	130	0.5	20	
Lab ID:	B17050928-001BMS3	11 Sa	mple Matrix	Spike		Run: ICPMS206-B_170515A				05/15/	17 15:40
Antimony			0.511	mg/L	0.0010	102	70	130			
Arsenic			0.513	mg/L	0.0010	103	70	130			
Barium			0.842	mg/L	0.050	168	70	130			S
Beryllium			0.251	mg/L	0.0010	100	70	130			
Cadmium			0.240	mg/L	0.0010	96	70	130			
Chromium			0.489	mg/L	0.0050	98	70	130			
Cobalt			0.496	mg/L	0.0050	99	70	130			
Lead			0.519	mg/L	0.0010	104	70	130			
Molybdenu	ım		0.553	mg/L	0.0010	111	70	130			
Selenium			0.494	mg/L	0.0010	99	70	130			
Thallium			0.479	mg/L	0.00050	96	70	130			
Lab ID:	B17050928-001BMS) 11 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_17051	5A	05/15/	17 15:43
Antimony			0.517	mg/L	0.0010	103	70	130	1.1	20	
Arsenic			0.504	mg/L	0.0010	101	70	130	1.9	20	
Barium			0.846	mg/L	0.050	169	70	130	0.5	20	S
Beryllium			0.253	mg/L	0.0010	101	70	130	0.9	20	
Cadmium			0.244	mg/L	0.0010	98	70	130	1.9	20	
Chromium			0.497	mg/L	0.0050	99	70	130	1.7	20	
Cobalt			0.508	mg/L	0.0050	102	70	130	2.3	20	
Lead			0.521	mg/L	0.0010	104	70	130	0.5	20	
Molybdenu	ım		0.566	mg/L	0.0010	113	70	130	2.4	20	
Selenium			0.492	mg/L	0.0010	98	70	130	0.4	20	
Thallium			0.485	mg/L	0.00050	97	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

S - Spike recovery outside of advisory limits.

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run: l	HGCV202-B_	_170512A
Lab ID:	ICV	Initi	ial Calibrati	on Verificat	tion Standard					05/12/	17 11:59
Mercury			0.00207	mg/L	0.00010	104	90	110			
Method:	E245.1									Batcl	h: 109452
Lab ID:	MB-109452	Me	thod Blank				Run: HGC\	/202-B_170512A	١	05/12/	17 12:24
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-109452	Lab	oratory Co	ntrol Samp	le		Run: HGC\	/202-B_170512A	١	05/12/	17 12:25
Mercury			0.00204	mg/L	0.00010	102	85	115			
Lab ID:	B17050929-001BMS	Sar	mple Matrix	Spike			Run: HGC\	/202-B_170512A	١	05/12/	17 12:29
Mercury			0.00207	mg/L	0.00010	103	70	130			
Lab ID:	B17050929-001BMSI	D Sar	mple Matrix	Spike Dup	olicate		Run: HGC\	/202-B_170512A	١	05/12/	17 12:31
Mercury			0.00210	mg/L	0.00010	105	70	130	1.5	30	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/24/17Project:TMPA 6706150060Work Order:B17050949

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 1_	_170511A
Lab ID:	ICV	2 Init	al Calibratio	on Verification St	andard					05/11/	17 15:47
Chloride			2.04	mg/L	1.0	91	90	110			
Sulfate			8.38	mg/L	1.0	93	90	110			
Method:	E300.0									Batch:	R279760
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_170	0511A	05/11/	17 16:06
Chloride			ND	mg/L	0.009						
Sulfate			ND	mg/L	0.01						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 1_170	0511A	05/11/	17 16:25
Chloride			9.99	mg/L	1.0	100	90	110			
Sulfate			29.9	mg/L	1.0	100	90	110			
Lab ID:	B17050949-001AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 1_170	0511A	05/12/	17 03:48
Chloride			2140	mg/L	6.1	101	90	110			
Sulfate			4280	mg/L	18	104	90	110			
Lab ID:	B17050949-001AMSE	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0511A	05/12/	17 04:07
Chloride			2120	mg/L	6.1	99	90	110	1.0	20	
Sulfate			4250	mg/L	18	102	90	110	8.0	20	

Qualifiers:



Prepared by Casper, WY Branch

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit	it Qual
Method: E903.0		Batch:	RA226-8500
Lab ID: LCS-RA226-8500	Laboratory Control Sample	Run: G5000W_170516B 05	/30/17 11:45
Radium 226	8.3 pCi/L	82 80 120	
Lab ID: MB-RA226-8500	Method Blank	Run: G5000W_170516B 05	/30/17 11:45
Radium 226	0.1 pCi/L		U
Radium 226 precision (±)	0.1 pCi/L		
Radium 226 MDC	0.2 pCi/L		
Lab ID: C17050286-001CMS	Sample Matrix Spike	Run: G5000W_170516B 05	/30/17 11:45
Radium 226	19 pCi/L	82 70 130	
Lab ID: C17050286-001CMSD	Sample Matrix Spike Duplicate	Run: G5000W_170516B 05	/30/17 11:45
Radium 226	17 pCi/L	76 70 130 6.7 20)



Prepared by Casper, WY Branch

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: RA-05		Batch: RA228-5500
Lab ID: LCS-228-RA226-8500	Laboratory Control Sample	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	9.8 pCi/L	91 80 120
Lab ID: MB-RA226-8500	Method Blank	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	0.5 pCi/L	U
Radium 228 precision (±)	0.8 pCi/L	
Radium 228 MDC	1 pCi/L	
Lab ID: C17050286-013CMS	Sample Matrix Spike	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	20 pCi/L	82 70 130
Lab ID: C17050286-013CMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170516B 05/24/17 10:30
Radium 228	20 pCi/L	80 70 130 2.0 20

Work Order Receipt Checklist

Texas Municipal Power Agency

B17050949

Login completed by:	Gina McCartney		Date	Received: 5/10/2017
Reviewed by:	BL2000\tedwards		Re	eceived by: gmm
Reviewed Date:	5/11/2017		Ca	rrier name: Return-UPS NDA N/C
Shipping container/cooler in	good condition?	Yes √	No 🗌	Not Present
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🔽	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🗸	No 🗌	
Chain of custody agrees with	n sample labels?	Yes 🗸	No 🗌	
Samples in proper container	/bottle?	Yes 🔽	No 🗌	
Sample containers intact?		Yes	No 🗹	
Sufficient sample volume for	indicated test?	Yes 🔽	No 🗌	
All samples received within h (Exclude analyses that are c such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank tempe	erature:	9.8°C Melted Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

A Chain of Custody was not received with this cooler. This cooler contains the missing samples from work order B17050604 due to the cooler being lost in transit. Continue with analysis per email from Shari Endy, Energy Laboratory Project Manager. The Chain of Custody was originated in laboratory using information from the Chain of Custody associated with work order B17050604.

One of the two containers for sample SSP MW-4 for Radiochemistry was received with the lid off and completely empty. There is sufficient volume to continue with analysis using remaining container.

Company Name:		0.00			
7,0	0 0 11 10	Froject Name, PWS, Permit, Etc.	Effc. ,	Sample Origin	EPA/State Compliance:
	6	11111 675	0706150060	State:	Yes ☐ No ☐
		Gred Servert	hone/Fax: Emai $512-795-036$	Email:	Sampler: (Please Print)
Invoice Address:		Invoice Contact & Phone:		Purchase Order:	Quote/Bottle Order
Special Report/Formats:		J	ANALYSIS REQUESTED	Contact ELI prior to	Shipped by:
	EDD/EDT(Electronic Data)	ontainers V S V B O I Is/Solids issay <u>O</u> the	,	R scheduling – See Instruction Page	Cooler ID(s):
POTW/WWTP State:	Format: LEVEL IV	Water Solution Blos - Drinking - Orinking	N.	U Comments:	Receipt Temp
		viA Stegeta VMG	SEE V	S COC ORIGINATED IN LABORATORY	Custody Seal On Ice: Y On Bottle Y On Cooler V
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Collection Date Time	MATRIX SOL	eiS	<u> </u>	_ ⊑ ಚೆ.
155P-MW-4	5-417 09:55	×			Match Match
55K-MM-3 8	5-4-7 11:25	× ×			
-052317	25:21 LH-S1	X			3 S
SSP-MW-2	57:31 12:42	X			
9					
7					
8					.VE
5					108
10					
Custody Relinquished by (print):	Date/Time:	Signature:	Received by (print): Da	Date/Time:	Signature.
Record Relinquished by (print): MUST be	IN LABORATORY	Signature:	Received by (print): Dar	Date/Time:	Signatur
Sample Disposal:	Return to Client:	Lab Disposal:	Month of Laboratory	Terripe 7 69:30	NI VI VIII

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17051284 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 2 samples for Texas Municipal Power Agency on 5/12/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17051284-001	SFL MW-7	05/11/17 12	:02 05/12/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

TMPA 6706150060

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 06/13/17

Work Order: B17051284 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

Project:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L)

Antimony 0.05 0.006
Cadmium 0.01 0.005
Thallium 0.01 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17051284-001 Client Sample ID: SFL MW-7

Revised Date: 12/21/17 **Report Date:** 06/13/17 Collection Date: 05/11/17 12:02 DateReceived: 05/12/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	678	mg/L		1		E200.7	05/17/17 02:54 / rlh
Magnesium		mg/L		1		E200.7	05/17/17 02:54 / rlh
Potassium		mg/L		1		E200.7	05/17/17 02:54 / rlh
Sodium	1230	mg/L	D	4		E200.7	05/17/17 02:54 / rlh
PHYSICAL PROPERTIES							
pH	6.8	s.u.	Н	0.1		A4500-H B	05/12/17 19:59 / pjw
Solids, Total Dissolved TDS @ 180 C	7260	mg/L	D	100		A2540 C	05/15/17 08:35 / mnh
INORGANICS							
Chloride	2870	mg/L	D	6		E300.0	05/17/17 22:56 / cjm
Sulfate	811	mg/L	D	20		E300.0	05/17/17 22:56 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	05/16/17 12:33 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	05/17/17 00:38 / jpv
Arsenic	ND	mg/L		0.01		E200.8	05/17/17 00:38 / jpv
Barium	0.04	mg/L		0.01		E200.7	05/17/17 02:54 / rlh
Beryllium	ND	mg/L		0.001		E200.8	05/17/17 00:38 / jpv
Boron	0.75	mg/L		0.05		E200.7	05/17/17 02:54 / rlh
Cadmium	ND	mg/L		0.005		E200.8	05/17/17 00:38 / jpv
Chromium	ND	mg/L		0.01		E200.8	05/17/17 00:38 / jpv
Cobalt	ND	mg/L		0.02		E200.8	05/17/17 23:08 / jpv
Lead	ND	mg/L		0.01		E200.8	05/17/17 00:38 / jpv
Lithium	0.46	mg/L	D	0.04		E200.7	05/17/17 02:54 / rlh
Mercury	ND	mg/L		0.001		E245.1	05/15/17 15:17 / jh
Molybdenum	ND	mg/L		0.05		E200.8	05/17/17 00:38 / jpv
Selenium	ND	mg/L		0.01		E200.8	05/17/17 00:38 / jpv
Thallium	ND	mg/L		0.002		E200.8	05/17/17 00:38 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.61	pCi/L				E903.0	06/12/17 09:33 / eli-ca
Radium 226 precision (±)	0.21	pCi/L				E903.0	06/12/17 09:33 / eli-ca
Radium 226 MDC	0.23	pCi/L				E903.0	06/12/17 09:33 / eli-ca
Radium 228	1.3	pCi/L				RA-05	06/07/17 10:44 / eli-ca
Radium 228 precision (±)	0.59	pCi/L				RA-05	06/07/17 10:44 / eli-ca
Radium 228 MDC	1.1	pCi/L				RA-05	06/07/17 10:44 / eli-ca
Radium 226 + Radium 228	1.9	pCi/L				A7500-RA	06/13/17 13:14 / eli-ca
Radium 226 + Radium 228 precision (±)	0.6	pCi/L				A7500-RA	06/13/17 13:14 / eli-ca
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	06/13/17 13:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.





Prepared by Casper, WY Branch

Analyte	Result Units	RL %REC Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0			Batch: RA226-8514
Lab ID: LCS-RA226-8514	Laboratory Control Sample	Run: G5000W_170601A	06/12/17 09:33
Radium 226	9.4 pCi/L	92 80 120	
Lab ID: MB-RA226-8514	Method Blank	Run: G5000W_170601A	06/12/17 09:33
Radium 226	0.2 pCi/L		U
Radium 226 precision (±)	0.1 pCi/L		
Radium 226 MDC	0.2 pCi/L		
Lab ID: C17050807-003DMS	Sample Matrix Spike	Run: G5000W_170601A	06/12/17 09:34
Radium 226	25 pCi/L	111 70 130	
Lab ID: C17050807-003DMSD	Sample Matrix Spike Duplicate	Run: G5000W_170601A	06/12/17 09:34
Radium 226	20 pCi/L	91 70 130	20 20





Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 06/13/17 **Project:** TMPA 6706150060 Work Order: B17051284

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: RA-05		Batch: RA228-5510
Lab ID: LCS-228-RA226-8514	Laboratory Control Sample	Run: TENNELEC-3_170601A 06/07/17 10:44
Radium 228	9.0 pCi/L	83 80 120
Lab ID: MB-RA226-8514	Method Blank	Run: TENNELEC-3_170601A 06/07/17 10:44
Radium 228	0.5 pCi/L	U
Radium 228 precision (±)	0.6 pCi/L	
Radium 228 MDC	1 pCi/L	
Lab ID: C17050807-009DMS	Sample Matrix Spike	Run: TENNELEC-3_170601A 06/07/17 10:44
Radium 228	21 pCi/L	82 70 130
Lab ID: C17050807-009DMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170601A 06/07/17 10:44
Radium 228	21 pCi/L	80 70 130 2.4 20

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/13/17

Project: TMPA 6706150060

Work Order: B17051284

Method:			Result	Units	NL.	/orec	LOW LIIIII	High Limit	KFD	RPDLimit	Qual
wictiioa.	E200.7							Anal	∕tical Ru	n: ICP203-B_	_170516B
Lab ID:	ICV	7 Cor	ntinuing Cali	bration Veri	fication Standa	rd				05/16/	17 11:01
Barium			2.43	mg/L	0.10	97	95	105			
Boron			2.49	mg/L	0.10	100	95	105			
Calcium			24.9	mg/L	1.0	100	95	105			
Lithium			1.24	mg/L	0.10	100	95	105			
Magnesium			24.8	mg/L	1.0	99	95	105			
Potassium			24.8	mg/L	1.0	99	95	105			
Sodium			24.9	mg/L	1.0	100	95	105			
Method:	E200.7									Batcl	h: 109493
Lab ID:	MB-109493	7 Met	thod Blank				Run: ICP20	3-B_170516B		05/17/	17 01:30
Barium			ND	mg/L	0.0005						
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesium			ND	mg/L	0.07						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.4						
Lab ID:	LCS-109493	7 Lab	oratory Cor	trol Sample	:		Run: ICP20	3-B_170516B		05/17/	17 01:34
Barium			0.460	mg/L	0.10	92	85	115			
Boron			0.455	mg/L	0.10	91	85	115			
Calcium			24.3	mg/L	1.0	97	85	115			
Lithium			0.484	mg/L	0.10	97	85	115			
Magnesium			24.5	mg/L	1.0	98	85	115			
Potassium			24.3	mg/L	1.0	97	85	115			
Sodium			23.5	mg/L	1.0	94	85	115			
Lab ID:	B17051268-001BMS3	7 Sar	mple Matrix	Spike			Run: ICP20	3-B_170516B		05/17/	17 02:26
Barium			0.598	mg/L	0.050	105	70	130			
Boron			0.880	mg/L	0.050	107	70	130			
Calcium			68.5	mg/L	1.0	107	70	130			
Lithium			0.606	mg/L	0.10	110	70	130			
Magnesium			49.0	mg/L	1.0	109	70	130			
Potassium			85.0	mg/L	1.0	101	70	130			
Sodium			252	mg/L	1.0		70	130			Α
Lab ID:	B17051268-001BMS	7 Sar	mple Matrix	Spike Dupli	cate		Run: ICP20	3-B_170516B		05/17/	17 02:30
Barium			0.576	mg/L	0.050	101	70	130	3.8	20	
Boron			0.852	mg/L	0.050	102	70	130	3.2	20	
Calcium			67.0	mg/L	1.0	101	70	130	2.3	20	
Lithium			0.595	mg/L	0.10	108	70	130	1.8	20	
Magnesium			47.8	mg/L	1.0	104	70	130	2.6	20	
Potassium			84.4	mg/L	1.0	99	70	130	0.7	20	
Sodium			247	mg/L	1.0		70	130	2.0	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 06/13/17

Project: TMPA 6706150060

Work Order: B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.8							Analytical	Run: ICPMS206-B	_170515A
Lab ID:	QCS	9 Initial	Calibratio	n Verifica	ition Standard				05/16/	17 19:32
Antimony			0.0472	mg/L	0.050	94	90	110		
Arsenic			0.0518	mg/L	0.0050	104	90	110		
Beryllium			0.0245	mg/L	0.0010	98	90	110		
Cadmium			0.0231	mg/L	0.0010	92	90	110		
Chromium			0.0482	mg/L	0.010	96	90	110		
Lead			0.0484	mg/L	0.010	97	90	110		
Molybdenu	m		0.0461	mg/L	0.0050	92	90	110		
Selenium			0.0525	mg/L	0.0050	105	90	110		
Thallium			0.0498	mg/L	0.10	100	90	110		
Method:	E200.8								Batcl	h: 109493
Lab ID:	MB-109493	10 Metho	od Blank				Run: ICPM	S206-B_170515A	05/16/	17 22:52
Antimony			ND	mg/L	0.00004			_		
Arsenic			ND	mg/L	0.0002					
Beryllium			ND	mg/L	0.00008					
Cadmium			ND	mg/L	0.00003					
Chromium			0.0001	mg/L	0.0001					
Cobalt			ND	mg/L	0.00002					
Lead			ND	mg/L	0.00003					
Molybdenu	m		ND	mg/L	0.00003					
Selenium			ND	mg/L	0.0004					
Thallium		C	0.00003	mg/L	7E-06					
Lab ID:	LCS-109493	10 Labor	ratory Con	ntrol Samp	ole		Run: ICPM	S206-B_170515A	05/16/	17 22:59
Antimony			0.480	mg/L	0.0010	96	85	115		
Arsenic			0.455	mg/L	0.0010	91	85	115		
Beryllium			0.240	mg/L	0.0010	96	85	115		
Cadmium			0.237	mg/L	0.0010	95	85	115		
Chromium			0.460	mg/L	0.0050	92	85	115		
Cobalt			0.472	mg/L	0.0050	94	85	115		
Lead			0.467	mg/L	0.0010	93	85	115		
Molybdenu	m		0.452	mg/L	0.0010	90	85	115		
Selenium			0.482	mg/L	0.0010	96	85	115		
Thallium			0.500	mg/L	0.00050	100	85	115		
Lab ID:	B17051268-001BMS3	10 Samp	ole Matrix	Spike			Run: ICPM	S206-B_170515A	05/17/	/17 00:11
Antimony			0.529	mg/L	0.0010	106	70	_ 130		
Arsenic			0.508	mg/L	0.0010	101	70	130		
Beryllium			0.261	mg/L	0.0010	105	70	130		
Cadmium			0.240	mg/L	0.0010	96	70	130		
Chromium			0.460	mg/L	0.0050	92	70	130		
Cobalt			0.519	mg/L	0.0050	104	70	130		
Lead			0.500	mg/L	0.0010	100	70	130		
Molybdenu	m		0.543	mg/L	0.0010	102	70	130		
Selenium			0.502	mg/L	0.0010	97	70	130		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Prepared by Billings, MT Branch

Revised Date: 12/21/17

Client: Texas Municipal Power Agency

Project: TMPA 6706150060

Revised Date: 12/21/17

Report Date: 06/13/17

Work Order: B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	n: 109493
Lab ID:	B17051268-001BMS3	3 10 Sar	nple Matrix	Spike			Run: ICPM	S206-B_170515A		05/17/	17 00:11
Thallium			0.536	mg/L	0.00050	107	70	130			
Lab ID:	B17051268-001BMSI	D 10 Sar	nple Matrix	Spike Du	plicate		Run: ICPM	S206-B_170515A		05/17/	17 00:14
Antimony			0.491	mg/L	0.0010	98	70	130	7.3	20	
Arsenic			0.500	mg/L	0.0010	99	70	130	1.7	20	
Beryllium			0.240	mg/L	0.0010	96	70	130	8.6	20	
Cadmium			0.224	mg/L	0.0010	90	70	130	7.0	20	
Chromium			0.463	mg/L	0.0050	92	70	130	0.7	20	
Cobalt			0.477	mg/L	0.0050	95	70	130	8.4	20	
Lead			0.460	mg/L	0.0010	92	70	130	8.3	20	
Molybdenu	m		0.508	mg/L	0.0010	95	70	130	6.6	20	
Selenium			0.487	mg/L	0.0010	94	70	130	3.0	20	
Thallium			0.469	mg/L	0.00050	94	70	130	13	20	
Method:	E200.8							Analytical	Run: I	CPMS206-B_	170517A
Lab ID:	QCS	Initi	al Calibration	on Verifica	ation Standard					05/17/	17 22:51
Cobalt			0.0502	mg/L	0.010	100	90	110			
Method:	E200.8									Batch	n: 109493
Lab ID:	MB-109493	Met	hod Blank				Run: ICPM	S206-B_170517A		05/17/	17 23:05
Cobalt			ND	mg/L	0.00002						

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 06/13/17

Revised Date: 12/21/17

Project: TMPA 6706150060

Work Order: B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run:	HGCV202-B	_170515A
Lab ID:	ICV	Init	tial Calibratio	on Verifica	tion Standard					05/15/	17 14:48
Mercury			0.00200	mg/L	0.00010	100	90	110			
Method:	E245.1									Batcl	h: 109521
Lab ID:	MB-109521	Me	thod Blank				Run: HGCV	/202-B_170515A		05/15/	17 14:54
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-109521	La	boratory Co	ntrol Samp	le		Run: HGCV	/202-B_170515A		05/15/	17 14:56
Mercury			0.00202	mg/L	0.00010	101	85	115			
Lab ID:	B17051284-002BMS	Sa	mple Matrix	Spike			Run: HGCV	/202-B_170515A		05/15/	17 15:21
Mercury			0.00186	mg/L	0.00010	93	70	130			
Lab ID:	B17051284-002BMS	D Sa	mple Matrix	Spike Dup	olicate		Run: HGCV	/202-B_170515A		05/15/	17 15:22
Mercury			0.00186	mg/L	0.00010	93	70	130	0.2	30	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/30/17Project:TMPA 6706150060Work Order:B17051284

Analyte	Count Result	Units	RL	%REC Low Li	nit High Limit	RPD	RPDLimit	Qual
Method: A2540 C							Batch	n: 109527
Lab ID: MB-109527	Method Blank			Run: B	L #SD-15_170515C	;	05/15/	17 08:27
Solids, Total Dissolved TDS @ 180	O C ND	mg/L	4					
Lab ID: LCS-109527	Laboratory Co	ntrol Sample		Run: B	L #SD-15_170515C	;	05/15/	17 08:27
Solids, Total Dissolved TDS @ 180	O C 997	mg/L	10	99	90 110			
Lab ID: B17051243-001A DUP	Sample Duplic	ate		Run: B	L #SD-15_170515C	;	05/15/	17 08:28
Solids, Total Dissolved TDS @ 180	0 C 12600	mg/L	99			0.5	5	
Lab ID: B17051243-011A DUP	Sample Duplic	ate		Run: B	L #SD-15_170515C	;	05/15/	17 08:32
Solids, Total Dissolved TDS @ 180	C 7630	mg/L	99			0.4	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/30/17Project:TMPA 6706150060Work Order:B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	_170516A
Lab ID:	ICV	Initia	al Calibrati	on Verification S	Standard					05/16/	17 09:56
Fluoride			1.00	mg/L	0.10	100	90	110			
Method:	A4500-F C									Batch:	R279985
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170516A		05/16/	17 09:51
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory Fo	tified Blank			Run: MAN-	TECH_170516A		05/16/	17 09:53
Fluoride			1.02	mg/L	0.10	102	90	110			
Lab ID:	B17051268-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH_170516A		05/16/	17 13:25
Fluoride			12.4	mg/L	0.50	96	80	120			
Lab ID:	B17051268-001AMSI	D San	nple Matrix	Spike Duplicate	Э		Run: MAN-	TECH_170516A		05/16/	17 13:27
Fluoride			12.4	mg/L	0.50	97	80	120	0.4	10	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/30/17Project:TMPA 6706150060Work Order:B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: Ph	ISC _101-B_	_170512A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	tion Standard					05/12/	17 08:31
рН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R279755
Lab ID:	B17051279-003ADU	P Sam	nple Duplica	ate			Run: PHSC	_101-B_1705	12A	05/12/	17 19:46
рН			5.55	s.u.	0.10				0.9	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:05/30/17Project:TMPA 6706150060Work Order:B17051284

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	METROHM 2_	_170517A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification	Standard					05/17/	/17 11:53
Chloride			2.19	mg/L	1.0	97	90	110			
Sulfate			8.74	mg/L	1.0	97	90	110			
Method:	E300.0									Batch:	R280093
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_17	0517A	05/17/	/17 12:12
Chloride			ND	mg/L	0.002						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 2_17	0517A	05/17/	/17 12:32
Chloride			10.5	mg/L	1.0	105	90	110			
Sulfate			31.3	mg/L	1.0	104	90	110			
Lab ID:	B17051278-003AMS	2 Sai	mple Matrix	Spike			Run: IC ME	TROHM 2_17	0517A	05/17/	/17 22:17
Chloride			21.4	mg/L	1.0	106	90	110			
Sulfate			95.8	mg/L	1.0	105	90	110			
Lab ID:	B17051278-003AMSI	D 2 Saı	mple Matrix	Spike Duplicat	e		Run: IC ME	TROHM 2_17	0517A	05/17/	/17 22:36
Chloride			21.7	mg/L	1.0	107	90	110	1.2	20	
Sulfate			96.2	mg/L	1.0	106	90	110	0.4	20	

Qualifiers:

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Tabitha Edwards

B17051284

Date Received: 5/12/2017

Reviewed by:	BL2000\cindy		Re	eceived by: mme	
Reviewed Date:	5/15/2017		Ca	rrier name: Return-FedEx NDA	
Shipping container/cooler in	good condition?	Yes 🔽	No 🗌	Not Present	
Custody seals intact on all st	nipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Present	
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes ✓	No 🗌		
Chain of custody signed whe	en relinquished and received?	Yes ✓	No 🗌		
Chain of custody agrees with	sample labels?	Yes ✓	No 🗌		
Samples in proper container	bottle?	Yes √	No 🗌		
Sample containers intact?		Yes	No 🔽		
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌		
All samples received within h (Exclude analyses that are or such as pH, DO, Res CI, Su	onsidered field parameters	Yes √	No 🗌		
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes √	No 🗌	Not Applicable	
Container/Temp Blank tempe	erature:	2.4°C On Ice			
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted	
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

One of the two containers for sample SFL MW-7 for Radiochemistry was received with the lid off and completely empty. There is sufficient volume to continue with analysis using remaining container.



Chain of Custody & Analytical Request Record

www.energylab.com

All turnaround times are standard unless marked as MUST be contacted prior to RUSH sample submittal for charges and scheduling -See Instructions Page Energy Laboratories Receipt Number (cash/check only) Comments Signature See Attached Date/Time **Analysis Requested** ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other Report Information (if different than Account Information) Check Cash Received by (print) ပ္ပ LABORATORY II გ ი ∨ Special Report/Formats Company/Name Matrix Mailing Address City, State, Zip Matrix Codes 3 V - Vegetation B - Bioassay 3 DW - Drinking Water Soils/ Solids Temp Blank W- Water 0 - Other A - Air Z Contact Phone Number of Containers Email ŝ > Signature Signature Receipt Temp 1202 336 Mailing Address 3755 S. Capital of TX Hwy. #375 Sampler Phone 512-241-232 E E EPA/State Compliance 5/11/17 @ 15:50 Date/Time Collection ☐ Unprocessed ore (NOT ground or refined)* Receive Report Hard Copy Project Name, PWSID, Permit, otc. TMPA 6706/50060 Bottle Order Amec Foster Wheeker Email greg. Settert Danectu, com Custody Seals MINING CLIENTS, please indicate sample type.
If ore has been processed or refined, call before sending. ပ Account Information (Billing information) z Brien Gless/man Greg Seifert 512-795-0360 Sample Identification (Name, Location, Interval, etc.) Receive Involce AHard Copy Mail Sampler Name Brian Gicochman Austin, TX Quote Relinquished by (print) Cooler ID(s) SFL MW-7 AP MW-6 Project Information ☐ Byproduct 11 (e)2 material Sample Origin State Company/Name City, State, Zip Purchase Order Record MUST Shipped By be signed Contact Phone

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17060205 Quote ID: B3997 - CCRR

Project Name: TMPA 6706150060

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 6/2/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
					Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17060205-002	MNW-18	05/30/17 16:	:27 06/02/17	Ground Water	Same As Above
B17060205-004	EQBK-BJG-053017	05/30/17 18:	:55 06/02/17	Ground Water	Same As Above
B17060205-006	SFLMW-7	05/31/17 11:	:25 06/02/17	Ground Water	Same As Above
B17060205-007	MNW-15	05/31/17 12:	:51 06/02/17	Ground Water	Same As Above
B17060205-009	EQBK-BJG-053117	05/31/17 15:	:15 06/02/17	Ground Water	Same As Above
B17060205-010	DUP-1	05/31/17 0:0	00 06/02/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: TMPA 6706150060

Work Order: B17060205

CLIENT:

CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17060205-002

 Client Sample ID:
 MNW-18

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 05/30/17 16:27
DateReceived: 06/02/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	330	mg/L		1		E200.7	06/06/17 21:49 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 21:49 / rlh
Potassium		mg/L		1		E200.7	06/06/17 21:49 / rlh
Sodium	712	mg/L	D	2		E200.7	06/06/17 21:49 / rlh
PHYSICAL PROPERTIES							
pH	7.4	s.u.	Н	0.1		A4500-H B	06/02/17 15:59 / pjw
Solids, Total Dissolved TDS @ 180 C	3460	mg/L	D	40		A2540 C	06/03/17 08:38 / rik
INORGANICS							
Chloride	590	mg/L	D	3		E300.0	06/05/17 23:50 / cjm
Sulfate	1790	mg/L	D	9		E300.0	06/05/17 23:50 / cjm
Fluoride	0.2	mg/L		0.1		A4500-F C	06/06/17 13:36 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 19:57 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/07/17 19:57 / jpv
Barium	0.05	mg/L		0.01		E200.7	06/06/17 21:49 / rlh
Beryllium	ND	mg/L		0.001		E200.7	06/06/17 21:49 / rlh
Boron	0.44	mg/L		0.05		E200.7	06/06/17 21:49 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/06/17 21:49 / rlh
Chromium	ND	mg/L		0.01		E200.8	06/07/17 19:57 / jpv
Cobalt	ND	mg/L		0.02		E200.8	06/07/17 19:57 / jpv
Lead	ND	mg/L		0.01		E200.8	06/07/17 19:57 / jpv
Lithium	0.41	mg/L	D	0.02		E200.7	06/06/17 21:49 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/05/17 14:46 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/06/17 21:49 / rlh
Selenium		mg/L		0.01		E200.8	06/07/17 19:57 / jpv
Thallium	0.002	mg/L		0.002		E200.8	06/07/17 19:57 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.7	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 precision (±)	0.42	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 228	1.6	pCi/L	U			RA-05	06/28/17 14:35 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 226 + Radium 228	3.3	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	2.0	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17060205-004

 Client Sample ID:
 EQBK-BJG-053017

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 05/30/17 18:55
DateReceived: 06/02/17

Matrix: Ground Water

Analyses	Result	Unito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Result	Ullits	Qualifiers	NL .	QUL.	Wethou	Allalysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/06/17 21:56 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 21:56 / rlh
Potassium	ND	mg/L		1		E200.7	06/06/17 21:56 / rlh
Sodium	ND	mg/L		1		E200.7	06/06/17 21:56 / rlh
PHYSICAL PROPERTIES							
pH	6.4	s.u.	Н	0.1		A4500-H B	06/02/17 16:07 / pjw
Solids, Total Dissolved TDS @ 180 C	10	mg/L		10		A2540 C	06/03/17 08:38 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	06/06/17 00:29 / cjm
Sulfate		mg/L		1		E300.0	06/06/17 00:29 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/06/17 13:49 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 20:10 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/07/17 20:10 / jpv
Barium	ND	mg/L		0.01		E200.7	06/06/17 21:56 / rlh
Beryllium	ND	mg/L		0.001		E200.7	06/06/17 21:56 / rlh
Boron	ND	mg/L		0.05		E200.7	06/06/17 21:56 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/06/17 21:56 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/06/17 21:56 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/06/17 21:56 / rlh
Lead	ND	mg/L		0.01		E200.8	06/07/17 20:10 / jpv
Lithium	ND	mg/L		0.01		E200.7	06/06/17 21:56 / rlh
Mercury		mg/L		0.001		E245.1	06/05/17 14:53 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/06/17 21:56 / rlh
Selenium	ND	mg/L		0.01		E200.8	06/07/17 20:10 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/07/17 20:10 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.13	pCi/L	U			E903.0	07/03/17 11:10 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 228	-0.6	pCi/L	U			RA-05	06/28/17 14:35 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 226 + Radium 228		pCi/L	U			A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	2.2	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analy Definitions: QCL - Qui

RL - Analyte reporting limit. QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17060205-006

 Client Sample ID:
 SFLMW-7

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 05/31/17 11:25
DateReceived: 06/02/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	654	mg/L		1		E200.7	06/06/17 22:03 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 22:03 / rlh
Potassium		mg/L		1		E200.7	06/06/17 22:03 / rlh
Sodium	1230	mg/L	D	4		E200.7	06/06/17 22:03 / rlh
PHYSICAL PROPERTIES							
рН	6.8	s.u.	Н	0.1		A4500-H B	06/02/17 16:12 / pjw
Solids, Total Dissolved TDS @ 180 C	6810	mg/L	D	90		A2540 C	06/03/17 08:38 / rik
INORGANICS							
Chloride	2740	mg/L	D	6		E300.0	06/06/17 02:26 / cjm
Sulfate	778	mg/L	D	20		E300.0	06/06/17 02:26 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/06/17 13:54 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 20:15 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/07/17 20:15 / jpv
Barium	0.04	mg/L		0.01		E200.7	06/06/17 22:03 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/07/17 20:15 / jpv
Boron	0.78	mg/L		0.05		E200.7	06/06/17 22:03 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/07/17 20:15 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/07/17 20:15 / jpv
Cobalt	ND	mg/L		0.02		E200.8	06/07/17 20:15 / jpv
Lead	ND	mg/L		0.01		E200.8	06/07/17 20:15 / jpv
Lithium		mg/L	D	0.04		E200.7	06/06/17 22:03 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/05/17 14:57 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/07/17 20:15 / jpv
Selenium		mg/L		0.01		E200.8	06/07/17 20:15 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/07/17 20:15 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.65	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 228	3.7	pCi/L				RA-05	06/28/17 13:00 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	06/28/17 13:00 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	06/28/17 13:00 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

4DO Mili

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17060205-007 Client Sample ID: MNW-15

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 05/31/17 12:51 DateReceived: 06/02/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	269	mg/L		1		E200.7	06/06/17 22:07 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 22:07 / rlh
Potassium	25	mg/L		1		E200.7	06/06/17 22:07 / rlh
Sodium	421	mg/L	D	2		E200.7	06/06/17 22:07 / rlh
PHYSICAL PROPERTIES							
pH	3.7	s.u.	Н	0.1		A4500-H B	06/02/17 16:15 / pjw
Solids, Total Dissolved TDS @ 180 C	2720	mg/L	D	40		A2540 C	06/03/17 08:38 / rik
INORGANICS							
Chloride	704	mg/L	D	3		E300.0	06/06/17 02:46 / cjm
Sulfate	1230	mg/L	D	9		E300.0	06/06/17 02:46 / cjm
Fluoride	0.5	mg/L		0.1		A4500-F C	06/06/17 14:00 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 20:18 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/07/17 20:18 / jpv
Barium	0.02	mg/L		0.01		E200.7	06/06/17 22:07 / rlh
Beryllium	0.071	mg/L		0.001		E200.7	06/06/17 22:07 / rlh
Boron	8.75	mg/L		0.05		E200.7	06/06/17 22:07 / rlh
Cadmium	0.106	mg/L		0.005		E200.7	06/06/17 22:07 / rlh
Chromium		mg/L		0.01		E200.8	06/07/17 20:18 / jpv
Cobalt	0.28	mg/L		0.02		E200.8	06/07/17 20:18 / jpv
Lead	ND	mg/L		0.01		E200.8	06/07/17 20:18 / jpv
Lithium		mg/L	D	0.02		E200.7	06/06/17 22:07 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/05/17 14:59 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/06/17 22:07 / rlh
Selenium		mg/L		0.01		E200.8	06/07/17 20:18 / jpv
Thallium	0.002	mg/L		0.002		E200.8	06/07/17 20:18 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.35	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 228	-0.04	pCi/L	U			RA-05	06/28/17 14:35 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 226 + Radium 228	0.3	pCi/L	U			A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	2.0	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

 Project:
 TMPA 6706150060

 Lab ID:
 B17060205-009

 Client Sample ID:
 EQBK-BJG-053117

Revised Date: 12/21/17
Report Date: 07/06/17

Collection Date: 05/31/17 15:15

DateReceived: 06/02/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/06/17 22:14 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 22:14 / rlh
Potassium		mg/L		1		E200.7	06/06/17 22:14 / rlh
Sodium		mg/L		1		E200.7	06/06/17 22:14 / rlh
PHYSICAL PROPERTIES							
pH	6.1	s.u.	Н	0.1		A4500-H B	06/02/17 16:20 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/03/17 08:38 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	06/06/17 03:25 / cjm
Sulfate	ND	mg/L		1		E300.0	06/06/17 03:25 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/06/17 14:11 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 20:23 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/07/17 20:23 / jpv
Barium	ND	mg/L		0.01		E200.7	06/06/17 22:14 / rlh
Beryllium	ND	mg/L		0.001		E200.7	06/06/17 22:14 / rlh
Boron	ND	mg/L		0.05		E200.7	06/06/17 22:14 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/06/17 22:14 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/06/17 22:14 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/06/17 22:14 / rlh
Lead	ND	mg/L		0.01		E200.8	06/07/17 20:23 / jpv
Lithium	ND	mg/L		0.01		E200.7	06/06/17 22:14 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/05/17 15:02 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/06/17 22:14 / rlh
Selenium	ND	mg/L		0.01		E200.8	06/07/17 20:23 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/07/17 20:23 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	07/03/17 11:10 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	07/03/17 11:10 / eli-ca
Radium 228	2.2	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	06/28/17 14:35 / eli-ca
Radium 226 + Radium 228	2.3	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	2.2	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDO Military Control IIIIII

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA 6706150060 Lab ID: B17060205-010

Client Sample ID: DUP-1

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 05/31/17 DateReceived: 06/02/17 Matrix: Ground Water

Analyses	Decel	11-16-	0	D.	MCL/	Mathad	Analysis Data / Dy
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	699	mg/L		1		E200.7	06/06/17 22:24 / rlh
Magnesium		mg/L		1		E200.7	06/06/17 22:24 / rlh
Potassium		mg/L		1		E200.7	06/06/17 22:24 / rlh
Sodium		mg/L	D	4		E200.7	06/06/17 22:24 / rlh
PHYSICAL PROPERTIES		-					
pH	6.8	s.u.	Н	0.1		A4500-H B	06/02/17 16:23 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	06/05/17 14:09 / mnh
Collas, Total Dissolved TDO @ 100 O	7 100	mg/L	Б	100		A2040 O	00/00/17 14:03 / 1111111
INORGANICS							
Chloride	2780	mg/L	D	6		E300.0	06/06/17 03:44 / cjm
Sulfate	794	mg/L	D	20		E300.0	06/06/17 03:44 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	06/06/17 14:15 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/07/17 20:26 / jpv
Arsenic		mg/L		0.01		E200.8	06/07/17 20:26 / jpv
Barium		mg/L		0.01		E200.7	06/06/17 22:24 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/07/17 20:26 / jpv
Boron	0.81	mg/L		0.05		E200.7	06/06/17 22:24 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/07/17 20:26 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/07/17 20:26 / jpv
Cobalt	ND	mg/L		0.02		E200.8	06/07/17 20:26 / jpv
Lead	ND	mg/L		0.01		E200.8	06/07/17 20:26 / jpv
Lithium	0.48	mg/L	D	0.04		E200.7	06/06/17 22:24 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/05/17 15:04 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/07/17 20:26 / jpv
Selenium	0.02	mg/L		0.01		E200.8	06/07/17 20:26 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/07/17 20:26 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.55	pCi/L				E903.0	07/03/17 08:57 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/03/17 08:57 / eli-ca
Radium 226 MDC		pCi/L				E903.0	07/03/17 08:57 / eli-ca
Radium 228	2.9	pCi/L				RA-05	06/28/17 16:11 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/28/17 16:11 / eli-ca
Radium 228 MDC		pCi/L				RA-05	06/28/17 16:11 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 precision (±)	1					A7500-RA	07/03/17 13:46 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	07/03/17 13:46 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:07/03/17Project:TMPA 6706150060Work Order:B17060205

Analyte	Result Units	RL %REC	Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0				Batch: RA226-8535
Lab ID: LCS-RA226-8535	Laboratory Control Sa	mple	Run: G5000W_170621D	07/03/17 08:57
Radium 226	8.5 pCi/L	83	80 120	
Lab ID: MB-RA226-8535	Method Blank		Run: G5000W_170621D	07/03/17 08:57
Radium 226	0.1 pCi/L			U
Radium 226 precision (±)	0.1 pCi/L			
Radium 226 MDC	0.2 pCi/L			
Lab ID: C17060335-001CMS	Sample Matrix Spike		Run: G5000W_170621D	07/03/17 08:57
Radium 226	22 pCi/L	99	70 130	
Lab ID: C17060335-001CMSD	Sample Matrix Spike	Duplicate	Run: G5000W_170621D	07/03/17 08:57
Radium 226	19 pCi/L	85	70 130	15 20
Method: E903.0				Batch: RA226-8534
Lab ID: LCS-RA226-8534	Laboratory Control Sa	imple	Run: G542M_170621C	07/03/17 09:36
Radium 226	9.5 pCi/L	93	80 120	
Lab ID: MB-RA226-8534	Method Blank		Run: G542M_170621C	07/03/17 09:36
Radium 226	0.2 pCi/L			U
Radium 226 precision (±)	0.1 pCi/L			
Radium 226 MDC	0.2 pCi/L			
Lab ID: B17060205-001CMS	Sample Matrix Spike		Run: G542M_170621C	07/03/17 09:36
Radium 226	19 pCi/L	87	70 130	
Lab ID: B17060205-001CMSD	Sample Matrix Spike	Duplicate	Run: G542M_170621C	07/03/17 09:36
Radium 226	20 pCi/L	93		6.0 20

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:07/03/17Project:TMPA 6706150060Work Order:B17060205

Analyte	Result	Units	RL %REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05							Batch: RA	228-5523
Lab ID: LCS-228-RA226-8534	Laboratory Co	ntrol Sample		Run: TENI	NELEC-3_170621	4	06/28	3/17 13:00
Radium 228	10	pCi/L	105	80	120			
Lab ID: MB-RA226-8534	Method Blank			Run: TEN	NELEC-3_170621	Α.	06/28	3/17 13:00
Radium 228	0.6	pCi/L						U
Radium 228 precision (±)	1	pCi/L						
Radium 228 MDC	2	pCi/L						
Lab ID: B17060205-006CMS	Sample Matrix	Spike		Run: TENI	NELEC-3_170621	4	06/28	3/17 13:00
Radium 228	23	pCi/L	102	70	130			
Lab ID: B17060205-006CMSD	Sample Matrix	Spike Duplicate		Run: TEN	NELEC-3_170621	4	06/28	3/17 13:00
Radium 228	34	pCi/L	97	70	130	39	20	R
Method: RA-05							Batch: RA	228-5524
Lab ID: LCS-228-RA226-8535	Laboratory Co	ntrol Sample		Run: TENI	NELEC-3_170621E	3	06/28	3/17 16:11
Radium 228	9.6	pCi/L	102	80	120			
Lab ID: MB-RA226-8535	Method Blank			Run: TENI	NELEC-3_170621E	3	06/28	3/17 16:11
Radium 228	0.1	pCi/L						U
Radium 228 precision (±)	0.8	pCi/L						
Radium 228 MDC	1	pCi/L						
Lab ID: C17060350-010DMS	Sample Matrix	Spike		Run: TENI	NELEC-3_170621E	3	06/28	3/17 16:11
Radium 228	18	pCi/L	85	70	130			
Lab ID: C17060350-010DMSD	Sample Matrix	Spike Duplicate		Run: TENI	NELEC-3_170621E	3	06/28	3/17 16:11
Radium 228	18	pCi/L	82	70	130	2.1	20	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: TMPA 6706150060 Work Order: B17060205

Analyte		Count Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.7						Anal	ytical Run: ICP203-B	_170606 <i>A</i>
Lab ID:	ICV	12 Continuing Ca	libration Verif	ication Standa	rd			06/06/	/17 09:49
Barium		2.41	mg/L	0.10	96	95	105		
Beryllium		1.26	mg/L	0.010	101	95	105		
Boron		2.51	mg/L	0.10	100	95	105		
Cadmium		2.46	mg/L	0.010	98	95	105		
Calcium		24.7	mg/L	1.0	99	95	105		
Chromium		2.41	mg/L	0.050	97	95	105		
Cobalt		2.45	mg/L	0.020	98	95	105		
Lithium		1.21	mg/L	0.10	96	95	105		
Magnesiun	n	24.5	mg/L	1.0	98	95	105		
Molybdenu	ım	2.47	mg/L	0.10	99	95	105		
Potassium	l	24.1	mg/L	1.0	96	95	105		
Sodium		24.0	mg/L	1.0	96	95	105		
Method:	E200.7							Batc	h: 110160
Lab ID:	MB-110160	12 Method Blank				Run: ICP20	3-B_170606A	06/06/	/17 20:22
Barium		ND	mg/L	0.0005					
Beryllium		ND	mg/L	0.0001					
Boron		ND	mg/L	0.003					
Cadmium		ND	mg/L	0.0010					
Calcium		ND	mg/L	0.08					
Chromium		0.003	mg/L	0.002					
Cobalt		ND	mg/L	0.005					
Lithium		ND	mg/L	0.004					
Magnesiun	n	ND	mg/L	0.01					
Molybdenu	ım	ND	mg/L	0.007					
Potassium	1	ND	mg/L	0.07					
Sodium		ND	mg/L	0.03					
Lab ID:	LCS-110160	12 Laboratory Co	ntrol Sample			Run: ICP20	3-B_170606A	06/06/	/17 20:25
Barium		0.506	mg/L	0.10	101	85	_ 115		
Beryllium		0.266	mg/L	0.010	106	85	115		
Boron		0.493	mg/L	0.10	99	85	115		
Cadmium		0.255	mg/L	0.010	102	85	115		
Calcium		28.1	mg/L	1.0	113	85	115		
Chromium		0.502	mg/L	0.050	100	85	115		
Cobalt		0.514	mg/L	0.050	103	85	115		
Lithium		0.565	mg/L	0.10	113	85	115		
Magnesiun	n	27.9	mg/L	1.0	112	85	115		
Molybdenu		0.505	mg/L	0.10	101	85	115		
Potassium		28.2	mg/L	1.0	113	85	115		
Sodium		27.6	mg/L	1.0	110	85	115		
Lab ID:	B17060205-001BMS3	12 Sample Matrix	Snike			Run ICP20	3-B 170606A	06/06	/17 21:42
Barium		0.566	mg/L	0.050	104	70	130	00/00/	2 1.42
Janain		0.260	mg/L	0.0014	104	70	130		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: TMPA 6706150060

Work Order: B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batc	h: 110160
Lab ID:	B17060205-001BMS3	12 Sa	mple Matrix	Spike			Run: ICP20	3-B_170606A		06/06/	/17 21:42
Boron			1.21	mg/L	0.050	125	70	130			
Cadmium			0.255	mg/L	0.0099	102	70	130			
Calcium			664	mg/L	1.0		70	130			Α
Chromium			0.544	mg/L	0.020	109	70	130			
Cobalt			0.508	mg/L	0.052	102	70	130			
Lithium			1.21	mg/L	0.10	90	70	130			
Magnesium	1		131	mg/L	1.0		70	130			Α
Molybdenu	m		0.488	mg/L	0.071	98	70	130			
Potassium			77.2	mg/L	1.0	98	70	130			
Sodium			1330	mg/L	4.2		70	130			Α
Lab ID:	B17060205-001BMSE) 12 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170606A		06/06/	/17 21:46
Barium			0.568	mg/L	0.050	104	70	130	0.3	20	
Beryllium			0.252	mg/L	0.0014	101	70	130	3.2	20	
Boron			1.17	mg/L	0.050	118	70	130	3.1	20	
Cadmium			0.250	mg/L	0.0099	100	70	130	2.3	20	
Calcium			658	mg/L	1.0		70	130	1.0	20	Α
Chromium			0.525	mg/L	0.020	105	70	130	3.5	20	
Cobalt			0.509	mg/L	0.052	102	70	130	0.3	20	
Lithium			1.25	mg/L	0.10	98	70	130	3.4	20	
Magnesium	1		130	mg/L	1.0		70	130	1.1	20	Α
Molybdenu	m		0.427	mg/L	0.071	85	70	130	13	20	
Potassium			76.8	mg/L	1.0	97	70	130	0.6	20	
Sodium			1370	mg/L	4.2		70	130	2.6	20	Α
Lab ID:	B17060234-001CMS	12 Sa	mple Matrix	Spike			Run: ICP20	3-B_170606A		06/06/	/17 22:39
Barium			0.612	mg/L	0.050	111	70	130			
Beryllium			0.271	mg/L	0.0010	108	70	130			
Boron			1.21	mg/L	0.050	109	70	130			
Cadmium			0.267	mg/L	0.0050	107	70	130			
Calcium			29.8	mg/L	1.0	111	70	130			
Chromium			0.543	mg/L	0.010	109	70	130			
Cobalt			0.538	mg/L	0.026	108	70	130			
Lithium			0.701	mg/L	0.10	108	70	130			
Magnesium	1		27.8	mg/L	1.0	110	70	130			
Molybdenu	m		0.496	mg/L	0.036	99	70	130			
Potassium			29.8	mg/L	1.0	107	70	130			
Sodium			628	mg/L	2.1		70	130			Α
Lab ID:	B17060234-001CMSE) 12 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170606A		06/06/	/17 22:42
Barium			0.568	mg/L	0.050	102	70	130	7.4	20	
Beryllium			0.256	mg/L	0.0010	103	70	130	5.6	20	
Boron			1.15	mg/L	0.050	97	70	130	5.1	20	
Cadmium			0.257	mg/L	0.0050	103	70	130	3.8	20	
Calcium			28.8	mg/L	1.0	107	70	130	3.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: TMPA 6706150060

Work Order: B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	n: 110160
Lab ID:	B17060234-001CMSI	1 2 Sa	mple Matrix	Spike Duplicate	:		Run: ICP20	3-B_170606A		06/06/	17 22:42
Chromium			0.526	mg/L	0.010	105	70	130	3.1	20	
Cobalt			0.523	mg/L	0.026	105	70	130	3.0	20	
Lithium			0.649	mg/L	0.10	97	70	130	7.8	20	
Magnesium	า		26.9	mg/L	1.0	107	70	130	3.3	20	
Molybdenu	m		0.510	mg/L	0.036	102	70	130	2.7	20	
Potassium			27.6	mg/L	1.0	98	70	130	7.8	20	
Sodium			584	mg/L	2.1		70	130	7.3	20	Α
Method:	E200.7							Analy	rtical Ru	n: ICP203-B_	170607A
Lab ID:	ICV	Co	ntinuing Cal	ibration Verifica	tion Standar	·d				06/07/	17 10:35
Lithium			1.21	mg/L	0.10	97	95	105			
Method:	E200.7									Batch	n: 110160
Lab ID:	MB-110160	Me	thod Blank				Run: ICP20	3-B 170607A		06/07/	17 22:46
Lithium			ND	mg/L	0.004			_			
Lab ID:	LCS-110160	Lal	boratory Co	ntrol Sample			Run: ICP20	3-B 170607A		06/07/	17 22:49
Lithium			0.501	mg/L	0.10	100	85	115			
Lab ID:	B17060205-001BMS3	3 Sa	mple Matrix	Spike			Run: ICP20	3-B_170607A		06/07/	17 23:10
Lithium			1.22	mg/L	0.10	103	70	130			
Lab ID:	B17060205-001BMSI) Sa	mple Matrix	Spike Duplicate	:		Run: ICP20	3-B_170607A		06/07/	17 23:14
Lithium			1.24	mg/L	0.10	107	70	130	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 Report Date: 07/06/17

Project: TMPA 6706150060

Work Order: B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytic	al Run: I	CPMS202-B	_170606A
Lab ID:	QCS	10 Initial	Calibration	on Verificat	ion Standard					06/07	/17 18:09
Antimony			0.0486	mg/L	0.050	97	90	110			
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Beryllium			0.0240	mg/L	0.0010	96	90	110			
Cadmium			0.0254	mg/L	0.0010	102	90	110			
Chromium			0.0505	mg/L	0.010	101	90	110			
Cobalt			0.0507	mg/L	0.010	101	90	110			
Lead			0.0490	mg/L	0.010	98	90	110			
Molybdenu	ım		0.0460	mg/L	0.0050	92	90	110			
Selenium			0.0507	mg/L	0.0050	101	90	110			
Thallium			0.0491	mg/L	0.10	98	90	110			
Method:	E200.8									Batc	h: 110160
Lab ID:	MB-110160	10 Metho	od Blank				Run: ICPM	S202-B 170606	Α	06/07	/17 19:07
Antimony			0.0002	mg/L	0.00004			_			
Arsenic			ND	mg/L	0.00006						
Beryllium		C	.00002	mg/L	0.00002						
Cadmium			ND	mg/L	0.00002						
Chromium			0.0006	mg/L	0.00009						
Cobalt		C	.00004	mg/L	0.00003						
Lead		C	80000.	mg/L	0.00005						
Molybdenu	ım		ND	mg/L	0.00007						
Selenium			0.0007	mg/L	0.0002						
Thallium			0.0005	mg/L	0.0001						
Lab ID:	LCS-110160	10 Labor	atory Co	ntrol Sampl	e		Run: ICPM	S202-B_170606	Α	06/07	/17 19:44
Antimony			0.500	mg/L	0.0010	100	85	115			
Arsenic			0.513	mg/L	0.0010	103	85	115			
Beryllium			0.235	mg/L	0.0010	94	85	115			
Cadmium			0.256	mg/L	0.0010	103	85	115			
Chromium			0.487	mg/L	0.0050	97	85	115			
Cobalt			0.485	mg/L	0.0050	97	85	115			
Lead			0.509	mg/L	0.0010	102	85	115			
Molybdenu	ım		0.495	mg/L	0.0010	99	85	115			
Selenium			0.502	mg/L	0.0010	100	85	115			
Thallium			0.491	mg/L	0.00050	98	85	115			
Lab ID:	B17060205-001BMS3	3 10 Samp	ole Matrix	Spike			Run: ICPM	S202-B_170606	Α	06/07	/17 19:46
Antimony		•	0.506	mg/L	0.0010	101	70	_ 130			
Arsenic			0.517	mg/L	0.0010	103	70	130			
Beryllium			0.224	mg/L	0.0010	90	70	130			
Cadmium			0.251	mg/L	0.0010	101	70	130			
Chromium			0.514	mg/L	0.0050	103	70	130			
Cobalt			0.504	mg/L	0.0050	101	70	130			
Lead			0.516	mg/L	0.0010	103	70	130			
Molybdenu	ım.		0.512	mg/L	0.0010	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17
Report Date: 07/06/17

Project: TMPA 6706150060

Work Order: B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	n: 110160
Lab ID:	B17060205-001BMS3	3 10 Sa	mple Matrix	Spike			Run: ICPM	06/07/	17 19:46		
Selenium			0.495	mg/L	0.0011	99	70	130			
Thallium			0.470	mg/L	0.00071	94	70	130			
Lab ID:	B17060205-001BMS	D 10 Sa	mple Matrix	Spike Du	plicate		Run: ICPM	S202-B_170606	4	06/07/	17 19:49
Antimony			0.514	mg/L	0.0010	103	70	130	1.6	20	
Arsenic			0.520	mg/L	0.0010	104	70	130	0.6	20	
Beryllium			0.231	mg/L	0.0010	92	70	130	2.9	20	
Cadmium			0.254	mg/L	0.0010	101	70	130	0.9	20	
Chromium			0.517	mg/L	0.0050	103	70	130	0.6	20	
Cobalt			0.505	mg/L	0.0050	101	70	130	0.2	20	
Lead			0.533	mg/L	0.0010	107	70	130	3.2	20	
Molybdenu	m		0.518	mg/L	0.0010	104	70	130	1.3	20	
Selenium			0.498	mg/L	0.0011	100	70	130	0.6	20	
Thallium			0.487	mg/L	0.00071	97	70	130	3.4	20	
Lab ID:	B17060234-001CMS	3 10 Sa	mple Matrix	(Spike			Run: ICPM	S202-B_170606	4	06/07/	17 20:31
Antimony			0.498	mg/L	0.0010	100	70	130			
Arsenic			0.492	mg/L	0.0010	98	70	130			
Beryllium			0.232	mg/L	0.0010	93	70	130			
Cadmium			0.249	mg/L	0.0010	99	70	130			
Chromium			0.489	mg/L	0.0050	98	70	130			
Cobalt			0.489	mg/L	0.0050	98	70	130			
Lead			0.521	mg/L	0.0010	104	70	130			
Molybdenu	m		0.490	mg/L	0.0010	98	70	130			
Selenium			0.462	mg/L	0.0010	92	70	130			
Thallium			0.489	mg/L	0.00050	98	70	130			
Lab ID:	B17060234-001CMSI	D 10 Sa	mple Matrix	Spike Du	plicate		Run: ICPM	S202-B_170606	4	06/07/	17 20:41
Antimony			0.517	mg/L	0.0010	103	70	130	3.7	20	
Arsenic			0.503	mg/L	0.0010	101	70	130	2.1	20	
Beryllium			0.239	mg/L	0.0010	96	70	130	3.1	20	
Cadmium			0.256	mg/L	0.0010	103	70	130	3.1	20	
Chromium			0.508	mg/L	0.0050	102	70	130	3.9	20	
Cobalt			0.502	mg/L	0.0050	100	70	130	2.5	20	
Lead			0.533	mg/L	0.0010	107	70	130	2.3	20	
Molybdenu	m		0.512	mg/L	0.0010	102	70	130	4.5	20	
Selenium			0.471	mg/L	0.0010	94	70	130	2.1	20	
Thallium			0.497	mg/L	0.00050	99	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Client:

QA/QC Summary Report

Prepared by Billings, MT Branch

Texas Municipal Power Agency

Revised Date: 12/21/17

Revised Date: 07/06/17

Project: TMPA 6706150060 **Work Order:** B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B_	_170605A
Lab ID:	ICV	Initia	l Calibratio	on Verificat	tion Standard					06/05/	17 13:25
Mercury			0.00207	mg/L	0.00010	103	90	110			
Method:	E245.1									Batcl	h: 110170
Lab ID:	MB-110170	Meth	od Blank				Run: HGC\	/202-B_170605A		06/05/	17 14:21
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-110170	Labo	ratory Cor	ntrol Samp	le		Run: HGC\	/202-B_170605A		06/05/	17 14:23
Mercury			0.00204	mg/L	0.00010	102	85	115			
Lab ID:	B17060151-006BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170605A		06/05/	17 14:30
Mercury		1	0.00192	mg/L	0.00010	96	70	130			
Lab ID:	B17060151-006BMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170605A		06/05/	17 14:32
Mercury			0.00188	mg/L	0.00010	94	70	130	2.1	30	
Lab ID:	B17060226-007CMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170605A		06/05/	17 15:11
Mercury			0.00205	mg/L	0.00010	102	70	130			
Lab ID:	B17060226-007CMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170605A		06/05/	17 15:13
Mercury		1	0.00204	mg/L	0.00010	102	70	130	0.2	30	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/16/17Project:TMPA 6706150060Work Order:B17060205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch	n: 110148
Lab ID: B17060204-004	A DUP San	nple Duplica	ite			Run: BAL #	SD-15_170602F		06/03/	17 08:38
Solids, Total Dissolved TDS	@ 180 C	225	mg/L	10				2.3	5	
Lab ID: B17060219-001	A DUP San	nple Duplica	ite			Run: BAL #	SD-15_170602F		06/03/	17 08:38
Solids, Total Dissolved TDS	@ 180 C	442	mg/L	10				1.9	5	
Lab ID: LCS-110148	Lab	oratory Con	trol Sample	e		Run: BAL #	SD-15_170602F		06/03/	17 08:38
Solids, Total Dissolved TDS	@ 180 C	994	mg/L	10	99	90	110			
Lab ID: MB-110148	Met	hod Blank				Run: BAL #	SD-15_170602F		06/03/	17 08:38
Solids, Total Dissolved TDS	@ 180 C	ND	mg/L	4						
Method: A2540 C									Batch	n: 110201
Lab ID: MB-110201	Met	hod Blank				Run: BAL #	SD-15_170605C		06/05/	17 14:09
Solids, Total Dissolved TDS	@ 180 C	ND	mg/L	4						
Lab ID: LCS-110201	Lab	oratory Con	trol Sample	e		Run: BAL #	SD-15_170605C		06/05/	17 14:09
Solids, Total Dissolved TDS	@ 180 C	982	mg/L	10	97	90	110			
Lab ID: B17060205-010	A DUP San	nple Duplica	ite			Run: BAL #	SD-15_170605C		06/05/	17 14:10
Solids, Total Dissolved TDS	@ 180 C	7100	mg/L	97				0.6	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/16/17Project:TMPA 6706150060Work Order:B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	_170606A
Lab ID:	ICV	Initia	al Calibratio	on Verification Sta	andard					06/06/	17 10:55
Fluoride			1.00	mg/L	0.10	100	90	110			
Method:	A4500-F C									Batch:	R281014
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170606A		06/06/	17 10:50
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory For	tified Blank			Run: MAN-	TECH_170606A		06/06/	17 10:52
Fluoride			0.980	mg/L	0.10	98	90	110			
Lab ID:	B17060205-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH_170606A		06/06/	17 13:31
Fluoride			1.07	mg/L	0.10	99	80	120			
Lab ID:	B17060205-001AMS	D Sam	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170606A		06/06/	17 13:34
Fluoride			1.08	mg/L	0.10	100	80	120	0.9	10	
Lab ID:	B17060226-001AMS	San	nple Matrix	Spike			Run: MAN-	TECH_170606A		06/06/	17 14:31
Fluoride			1.73	mg/L	0.10	107	80	120			
Lab ID:	B17060226-001AMS	D Sam	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170606A		06/06/	17 14:34
Fluoride			1.73	mg/L	0.10	107	80	120	0.0	10	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/16/17Project:TMPA 6706150060Work Order:B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: Ph	HSC _101-B_	_170602A
Lab ID:	pH 8	Initi	al Calibratio	n Verificat	tion Standard					06/02/	/17 08:39
рН			7.95	s.u.	0.10	99	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cali	bration Ve	rification Standa	rd				06/02/	/17 15:23
рН			7.01	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R280836
Lab ID:	B17060205-002ADUF	S an	nple Duplica	ate			Run: PHSC	_101-B_17060)2A	06/02/	/17 16:01
рН			7.39	s.u.	0.10				0.0	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/16/17Project:TMPA 6706150060Work Order:B17060205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	METROHM 1	_170605A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification Sta	andard					06/05/	/17 15:04
Chloride			2.21	mg/L	1.0	98	90	110			
Sulfate			8.95	mg/L	1.0	99	90	110			
Method:	E300.0									Batch:	R280991
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_17	0605A	06/05/	/17 15:23
Chloride			ND	mg/L	0.009						
Sulfate			0.1	mg/L	0.01						
Lab ID:	LFB	2 Lat	oratory For	tified Blank			Run: IC ME	TROHM 1_17	0605A	06/05/	/17 15:43
Chloride			10.4	mg/L	1.0	104	90	110			
Sulfate			31.5	mg/L	1.0	105	90	110			
Lab ID:	B17060194-015AMS	2 Sai	mple Matrix	Spike			Run: IC ME	TROHM 1_17	0605A	06/05/	/17 21:14
Chloride			232	mg/L	1.2	108	90	110			
Sulfate			1300	mg/L	3.7	101	90	110			
Lab ID:	B17060194-015AMSI	D 2 Sai	mple Matrix	Spike Duplicate		Run: IC METROHM 1_170605A				06/05/	/17 21:33
Chloride			233	mg/L	1.2	108	90	110	0.3	20	
Sulfate			1310	mg/L	3.7	101	90	110	0.1	20	
Lab ID:	B17060205-005AMS	2 Sai	mple Matrix	Spike			Run: IC ME	TROHM 1_17	0605A	06/06/	/17 01:47
Chloride			3040	mg/L	6.1	95	90	110			
Sulfate			4060	mg/L	18	107	90	110			
Lab ID:	B17060205-005AMSI	D 2 Saı	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_17	0605A	06/06/	/17 02:07
Chloride			3040	mg/L	6.1	95	90	110	0.1	20	
Sulfate			4080	mg/L	18	108	90	110	0.5	20	

Qualifiers:

Work Order Receipt Checklist

Texas Municipal Power Agency B17060205

Login completed by:	Kathi Renier		Date	Received: 6/2/2017					
Reviewed by:	BL2000\cindy		Red	ceived by: rs4					
Reviewed Date:	Reviewed Date: 6/4/2017		Carrier name: FedEx NDA						
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present					
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present					
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓					
Chain of custody present?		Yes ✓	No 🗌						
Chain of custody signed whe	en relinquished and received?	Yes √	No 🗌						
Chain of custody agrees with	Yes √	No 🗌							
Samples in proper container	/bottle?	Yes √	No 🗌						
Sample containers intact?		Yes √	No 🗌						
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌						
All samples received within h (Exclude analyses that are couch as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌						
Temp Blank received in all si	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable					
Container/Temp Blank tempe	erature:	°C On Ice							
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted					
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable					

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 4.6°C, shipping container 2 was 3.6°C, and shipping container 3 was 1.5°C.



Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information (if different than Account Information)	Comments
Company Name Foster Wheeler	CompanyName	
Contact Gred Sefert	Contact	
Phone 512-795-0360	Phone	
Mailing Address 3755 S, Captal of TX Hux #375	Mailing Address	
City, State, Zip Austin, TX 7870-	City, State, Zip	
Email area, seitertDamectus, com	Email	
Receive Invoice Altard Copy Annail Receive Report	Receive Report	
Purchase Order Quote Bottle Order	Special ReportFormats:	1
Project Information	Matrix Codes Analysis Requested	
Project Name, PWSID, Permit, etc. 7MPA 6706/50060		All turnaround times are standard unless marked as
Sampler Name Brian Lieselman Sampler Phone 512-241-3321	S. Solids S. Solids V - Vogetation	Energy Laboratories
Sample Origin State TX EPA/State Compliance Yes 🗆 No	, a	
MINING CLIENTS, please indicate sample type. "If one has been processed or refined, call before sending. □ Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)"	DW - Dimking LA Water Call M	charges and scheduling —
entif	•	RUSH TAT
1		B1106005-1
		r
6-053017		91
5 MNW-11 0952		>
7		9
		7
8 AP MW-6		
9 EQBK-BJG-053117 1515		7 7
10 DUP-1	> > >	0) ,
Record MIST Brian Bicchman Line Line By		Date/Time Adapature
Date/Time	1 1	They 438 Signatury -
	(1) NEW STATE OF ICE PROPERTY PROPERTY	Amount Receipt Number (cash/chack only)
COOIEI ID(s) Custody Scens Timeson	Y N Y N CC Cash Check	\$

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17061389

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 6/14/2017 for

Quote ID: B3997

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17061389-001	SSP/AP MW-1	06/12/17 14	50 06/14/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids. Total Dissolved

B17061389-003	AP MW-4	06/12/17 17:10 06/14/17	Ground Water Same As Above
B17061389-004	AP MW-3	06/12/17 18:08 06/14/17	Ground Water Same As Above
B17061389-005	AP MW-5	06/12/17 18:15 06/14/17	Ground Water Same As Above
B17061389-006	EQBK/SCM/061217	06/12/17 18:58 06/14/17	Ground Water Same As Above
B17061389-007	SFL MW-6	06/13/17 10:03 06/14/17	Ground Water Same As Above
B17061389-008	MNW-18	06/13/17 10:05 06/14/17	Ground Water Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CCRR

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 07/06/17

Work Order: B17061389 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

Project:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061389-001 Client Sample ID: SSP/AP MW-1

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/12/17 14:50 DateReceived: 06/14/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	666	mg/L		1		E200.7	06/20/17 00:27 / rlh
Magnesium		mg/L		1		E200.7	06/17/17 04:27 / slf
Potassium		mg/L		1		E200.7	06/17/17 04:27 / slf
Sodium		mg/L	D	4		E200.7	06/17/17 04:27 / slf
PHYSICAL PROPERTIES		J					
	6.1	s.u.	Н	0.1		A4500-H B	06/15/17 11:07 / piv
pH Solids, Total Dissolved TDS @ 180 C		mg/L	П D	100		A4500-H B A2540 C	06/15/17 11:07 / pjw 06/15/17 08:17 / mnh
Collas, Total Dissolved TDC @ 100 C	0720	IIIg/L	Б	100		A2340 C	00/13/17 00.17 / 1111111
INORGANICS							
Chloride	1600	mg/L	D	6		E300.0	06/21/17 02:48 / mej
Sulfate	3060	mg/L	D	20		E300.0	06/21/17 02:48 / mej
Fluoride	0.1	mg/L		0.1		A4500-F C	06/16/17 09:49 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/20/17 13:36 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/20/17 13:36 / jpv
Barium	0.06	mg/L		0.01		E200.7	06/17/17 04:27 / slf
Beryllium	ND	mg/L		0.001		E200.8	06/23/17 00:35 / jpv
Boron	0.74	mg/L		0.05		E200.7	06/17/17 04:27 / slf
Cadmium	ND	mg/L		0.005		E200.8	06/20/17 13:36 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/20/17 13:36 / jpv
Cobalt		mg/L		0.02		E200.8	06/20/17 13:36 / jpv
Lead		mg/L		0.01		E200.8	06/23/17 00:35 / jpv
Lithium		mg/L	D	0.04		E200.7	06/17/17 04:27 / slf
Mercury		mg/L		0.001		E245.1	06/19/17 14:35 / jh
Molybdenum		mg/L		0.05		E200.8	06/20/17 13:36 / jpv
Selenium		mg/L		0.01		E200.8	06/20/17 13:36 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/23/17 00:35 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.66	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228	1.0	pCi/L	U			RA-05	06/29/17 11:52 / eli-ca
Radium 228 precision (±)	0.92	pCi/L				RA-05	06/29/17 11:52 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	06/29/17 11:52 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061389-003 Client Sample ID: AP MW-4

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/12/17 17:10 DateReceived: 06/14/17

Matrix: Ground Water

	_				MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	519	mg/L		1		E200.7	06/20/17 00:55 / rlh
Magnesium		mg/L		1		E200.7	06/17/17 04:55 / slf
Potassium		mg/L		1		E200.7	06/17/17 04:55 / slf
Sodium		mg/L	D	2		E200.7	06/17/17 04:55 / slf
PHYSICAL PROPERTIES							
pH	5.9	s.u.	Н	0.1		A4500-H B	06/15/17 11:27 / pjw
Solids, Total Dissolved TDS @ 180 C	4130	mg/L	D	40		A2540 C	06/15/17 08:18 / mnh
INORGANICS							
Chloride	526	mg/L	D	3		E300.0	06/21/17 03:27 / mej
Sulfate		mg/L	D	9		E300.0	06/21/17 03:27 / mej
Fluoride		mg/L	5	0.1		A4500-F C	06/16/17 09:54 / bas
METALS, TOTAL RECOVERABLE		-					
Antimony	ND	mg/L		0.006		E200.8	06/20/17 14:00 / jpv
Arsenic		mg/L		0.000		E200.8	06/20/17 14:00 / jpv
Barium		mg/L		0.01		E200.7	06/17/17 04:55 / slf
Beryllium		mg/L		0.001		E200.7	06/17/17 04:55 / slf
Boron		mg/L		0.05		E200.7	06/17/17 04:55 / slf
Cadmium		mg/L		0.005		E200.7	06/20/17 14:00 / jpv
Chromium		mg/L		0.01		E200.8	06/20/17 14:00 / jpv
Cobalt		mg/L		0.02		E200.8	06/20/17 14:00 / jpv
Lead		mg/L		0.01		E200.8	06/23/17 01:02 / jpv
Lithium		mg/L	D	0.02		E200.7	06/17/17 04:55 / slf
Mercury		mg/L		0.001		E245.1	06/19/17 14:39 / jh
Molybdenum		mg/L		0.05		E200.7	06/17/17 04:55 / slf
Selenium	ND	mg/L		0.01		E200.8	06/20/17 14:00 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/23/17 01:02 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.80	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228	2.2	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061389-004 Client Sample ID: AP MW-3

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/12/17 18:08
DateReceived: 06/14/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	129	mg/L		1		E200.7	06/20/17 00:59 / rlh
Magnesium		mg/L		1		E200.7	06/17/17 04:58 / slf
Potassium		mg/L		1		E200.7	06/17/17 04:58 / slf
Sodium	238	mg/L		1		E200.7	06/17/17 04:58 / slf
PHYSICAL PROPERTIES							
рН	5.4	s.u.	Н	0.1		A4500-H B	06/15/17 11:33 / pjw
Solids, Total Dissolved TDS @ 180 C	1400	mg/L	D	20		A2540 C	06/15/17 08:18 / mnh
INORGANICS							
Chloride	152	mg/L		1		E300.0	06/21/17 03:46 / mej
Sulfate	740	mg/L	D	4		E300.0	06/21/17 03:46 / mej
Fluoride	0.1	mg/L		0.1		A4500-F C	06/16/17 09:57 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/20/17 14:03 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/20/17 14:03 / jpv
Barium	0.02	mg/L		0.01		E200.7	06/17/17 04:58 / slf
Beryllium	0.003	mg/L		0.001		E200.7	06/17/17 04:58 / slf
Boron	3.58	mg/L		0.05		E200.7	06/17/17 04:58 / slf
Cadmium	ND	mg/L		0.005		E200.8	06/20/17 14:03 / jpv
Chromium	ND	mg/L		0.01		E200.7	06/17/17 04:58 / slf
Cobalt	0.04	mg/L		0.02		E200.7	06/20/17 00:59 / rlh
Lead	ND	mg/L		0.01		E200.8	06/23/17 01:04 / jpv
Lithium		mg/L		0.01		E200.7	06/20/17 00:59 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/19/17 14:41 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/17/17 04:58 / slf
Selenium	ND	mg/L		0.01		E200.8	06/20/17 14:03 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/23/17 01:04 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.86	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228	1.6	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)	0.90	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228	2.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061389-005 Client Sample ID: AP MW-5

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/12/17 18:15 DateReceived: 06/14/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	512	mg/L		1		E200.7	06/20/17 01:02 / rlh
Magnesium		mg/L		1		E200.7	06/17/17 05:02 / slf
Potassium		mg/L		1		E200.7	06/17/17 05:02 / slf
Sodium	704	mg/L	D	4		E200.7	06/17/17 05:02 / slf
PHYSICAL PROPERTIES							
рН	3.6	s.u.	Н	0.1		A4500-H B	06/15/17 11:35 / pjw
Solids, Total Dissolved TDS @ 180 C	4830	mg/L	D	40		A2540 C	06/15/17 08:18 / mnh
INORGANICS							
Chloride	479	mg/L	D	6		E300.0	06/21/17 04:06 / mej
Sulfate	2900	mg/L	D	20		E300.0	06/21/17 04:06 / mej
Fluoride	1.0	mg/L		0.1		A4500-F C	06/16/17 10:08 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/20/17 14:16 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	06/20/17 14:16 / jpv
Barium	0.02	mg/L		0.01		E200.7	06/17/17 05:02 / slf
Beryllium	0.081	mg/L		0.001		E200.8	06/23/17 01:07 / jpv
Boron	3.38	mg/L		0.05		E200.7	06/17/17 05:02 / slf
Cadmium	0.010	mg/L		0.005		E200.8	06/20/17 14:16 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/20/17 14:16 / jpv
Cobalt		mg/L		0.02		E200.8	06/20/17 14:16 / jpv
Lead		mg/L		0.01		E200.8	06/20/17 14:16 / jpv
Lithium		mg/L	D	0.04		E200.7	06/17/17 05:02 / slf
Mercury		mg/L		0.001		E245.1	06/19/17 14:43 / jh
Molybdenum		mg/L		0.05		E200.8	06/20/17 14:16 / jpv
Selenium		mg/L		0.01		E200.8	06/20/17 14:16 / jpv
Thallium	0.002	mg/L		0.002		E200.8	06/20/17 14:16 / jpv
RADIONUCLIDES - TOTAL							
Radium 226		pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC		pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228		pCi/L	U			RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC		pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228	2.1	•				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17061389-006 Client Sample ID: EQBK/SCM/061217

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/12/17 18:58

DateReceived: 06/14/17

Matrix: Ground Water

Analyses	Result	Unito	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Result	Ullits	Qualifiers	NL .	QUL.	Wethou	Alialysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/20/17 01:06 / rlh
Magnesium		mg/L		1		E200.7	06/17/17 05:05 / slf
Potassium	ND	mg/L		1		E200.7	06/17/17 05:05 / slf
Sodium	ND	mg/L		1		E200.7	06/17/17 05:05 / slf
PHYSICAL PROPERTIES							
pH	5.7	s.u.	Н	0.1		A4500-H B	06/15/17 11:38 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/15/17 08:18 / mnh
INORGANICS							
Chloride	ND	mg/L		1		E300.0	06/21/17 04:25 / mej
Sulfate		mg/L		1		E300.0	06/21/17 04:25 / mej
Fluoride		mg/L		0.1		A4500-F C	06/16/17 10:16 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/20/17 14:20 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/20/17 14:20 / jpv
Barium	ND	mg/L		0.01		E200.7	06/17/17 05:05 / slf
Beryllium	ND	mg/L		0.001		E200.7	06/17/17 05:05 / slf
Boron	ND	mg/L		0.05		E200.7	06/17/17 05:05 / slf
Cadmium	ND	mg/L		0.005		E200.7	06/17/17 05:05 / slf
Chromium	ND	mg/L		0.01		E200.7	06/17/17 05:05 / slf
Cobalt	ND	mg/L		0.02		E200.7	06/20/17 01:06 / rlh
Lead	ND	mg/L		0.01		E200.8	06/20/17 14:20 / jpv
Lithium	ND	mg/L		0.01		E200.7	06/17/17 05:05 / slf
Mercury	ND	mg/L		0.001		E245.1	06/19/17 14:45 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/17/17 05:05 / slf
Selenium	ND	mg/L		0.01		E200.8	06/20/17 14:20 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/20/17 14:20 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.17	pCi/L	U			E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228	-0.7	pCi/L	U			RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228	-0.5	pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061389-007 Client Sample ID: SFL MW-6

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/13/17 10:03
DateReceived: 06/14/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	892	mg/L	D	2		E200.7	06/20/17 01:09 / rlh
Magnesium		mg/L	_	1		E200.7	06/20/17 01:09 / rlh
Potassium		mg/L		1		E200.7	06/20/17 01:09 / rlh
Sodium		mg/L	D	8		E200.7	06/17/17 05:09 / slf
PHYSICAL PROPERTIES							
рН	4.1	s.u.	Н	0.1		A4500-H B	06/15/17 11:40 / pjw
Solids, Total Dissolved TDS @ 180 C	9200	mg/L	D	90		A2540 C	06/15/17 08:19 / mnh
INORGANICS							
Chloride	3640	mg/L	D	10		E300.0	06/21/17 04:45 / mej
Sulfate		mg/L	D	40		E300.0	06/21/17 04:45 / mej
Fluoride		mg/L		0.1		A4500-F C	06/16/17 10:27 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/20/17 14:23 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/20/17 14:23 / jpv
Barium		mg/L		0.01		E200.7	06/20/17 01:09 / rlh
Beryllium	0.047	mg/L		0.001		E200.8	06/23/17 01:10 / jpv
Boron	0.16	mg/L	D	0.07		E200.7	06/17/17 05:09 / slf
Cadmium	0.011	mg/L		0.005		E200.8	06/20/17 14:23 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/20/17 14:23 / jpv
Cobalt	0.11	mg/L		0.02		E200.8	06/20/17 14:23 / jpv
Lead	ND	mg/L		0.01		E200.8	06/20/17 14:23 / jpv
Lithium	0.69	mg/L	D	0.09		E200.7	06/17/17 05:09 / slf
Mercury	ND	mg/L		0.001		E245.1	06/19/17 14:47 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/20/17 14:23 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/20/17 14:23 / jpv
Thallium	0.004	mg/L		0.002		E200.8	06/20/17 14:23 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	3.5	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 precision (±)	0.74	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 09:35 / eli-ca
Radium 228	5.5	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC		pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228	9.0	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military Solidor IIIIII

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit. D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061389-008

Client Sample ID: MNW-18

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/13/17 10:05 DateReceived: 06/14/17

Matrix: Ground Water

Analyses Result Units Qualifiers RL QCL Method Analysis Date	/ By
MAJOR IONS	
Calcium 350 mg/L 1 E200.7 06/20/17 01:13	/ rlh
Magnesium 61 mg/L 1 E200.7 06/17/17 05:12	
Potassium 36 mg/L 1 E200.7 06/17/17 05:12	
Sodium 771 mg/L D 2 E200.7 06/17/17 05:12	
PHYSICAL PROPERTIES	
pH 7.2 s.u. H 0.1 A4500-H B 06/15/17 11:43	/ piw
Solids, Total Dissolved TDS @ 180 C 3670 mg/L D 40 A2540 C 06/15/17 08:19	
INORGANICS	
Chloride 543 mg/L D 3 E300.0 06/20/17 14:21	/ mei
Sulfate 1790 mg/L D 9 E300.0 06/20/17 14:21	•
Fluoride 0.2 mg/L 0.1 A4500-F C 06/16/17 10:29	•
METALS, TOTAL RECOVERABLE	/ inv
Antimony ND mg/L 0.006 E200.8 06/20/17 14:27 Arsenic ND mg/L 0.01 E200.8 06/20/17 14:27	
Arsenic ND mg/L 0.01 E200.8 06/20/17 14:27 Barium 0.05 mg/L 0.01 E200.7 06/17/17 05:12	
Beryllium ND mg/L 0.001 E200.7 06/17/17 05:12	
Boron 0.44 mg/L 0.05 E200.7 06/17/17 05:12	
Cadmium ND mg/L 0.005 E200.8 06/20/17 14:27	
Chromium ND mg/L 0.01 E200.8 06/20/17 14:27	,,
Cobalt ND mg/L 0.02 E200.8 06/20/17 14:27	
Lead ND mg/L 0.01 E200.8 06/20/17 14:27	
Lithium 0.48 mg/L D 0.02 E200.7 06/17/17 05:12	/ slf
Mercury ND mg/L 0.001 E245.1 06/19/17 14:49	/ jh
Molybdenum ND mg/L 0.05 E200.7 06/17/17 05:12	/ slf
Selenium ND mg/L 0.01 E200.8 06/20/17 14:27	/ jpv
Thallium ND mg/L 0.002 E200.8 06/20/17 14:27	/ jpv
RADIONUCLIDES - TOTAL	
Radium 226 2.3 pCi/L E903.0 07/04/17 11:15	/ eli-ca
Radium 226 precision (±) 0.52 pCi/L E903.0 07/04/17 11:15	/ eli-ca
Radium 226 MDC 0.22 pCi/L E903.0 07/04/17 11:15	/ eli-ca
Radium 228 2.6 pCi/L RA-05 06/29/17 12:24	/ eli-ca
Radium 228 precision (±) 1.0 pCi/L RA-05 06/29/17 12:24	/ eli-ca
Radium 228 MDC 1.6 pCi/L RA-05 06/29/17 12:24	/ eli-ca
Radium 226 + Radium 228 4.8 pCi/L A7500-RA 07/05/17 09:40	/ eli-ca
Radium 226 + Radium 228 precision (±) 1.1 pCi/L A7500-RA 07/05/17 09:40	
Radium 226 + Radium 228 MDC 1.7 pCi/L A7500-RA 07/05/17 09:40	/ eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

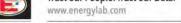


Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:07/05/17Project:CCRRWork Order:B17061389

Analyte	Result Units	RL %REC Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0			Batch: RA226-8538
Lab ID: LCS-RA226-8538	Laboratory Control Sample	Run: G542M_170622A	07/04/17 09:35
Radium 226	11 pCi/L	107 80 120	
Lab ID: MB-RA226-8538	Method Blank	Run: G542M_170622A	07/04/17 09:35
Radium 226	0.2 pCi/L		U
Radium 226 precision (±)	0.1 pCi/L		
Radium 226 MDC	0.2 pCi/L		
Lab ID: B17061389-002CMS	Sample Matrix Spike	Run: G542M_170622A	07/04/17 09:35
Radium 226	17 pCi/L	77 70 130	
Lab ID: B17061389-002CMSD	Sample Matrix Spike Duplicate	Run: G542M_170622A	07/04/17 09:35
Radium 226	18 pCi/L	83 70 130	7.0 20





Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 07/05/17 Project: CCRR Work Order: B17061389

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA	228-5525
Lab ID: LCS-228-RA226-8538	ntrol Sample			Run: TENN	NELEC-3_17062	2B	06/29	/17 11:52	
Radium 228	8.6	pCi/L		86	80	120			
Lab ID: MB-RA226-8538	Method Blank				Run: TENN	NELEC-3_17062	2B	06/29	/17 11:52
Radium 228	0.6	pCi/L							U
Radium 228 precision (±)	0.9	pCi/L							
Radium 228 MDC	1	pCi/L							
Lab ID: B17061389-010CMS	Sample Matrix	Spike			Run: TENN	NELEC-3_17062	2B	06/29	/17 11:52
Radium 228	26	pCi/L		123	70	130			
Lab ID: B17061389-010CMSD	Sample Matrix	Spike Duplicate			Run: TENN	NELEC-3_17062	2B	06/29	/17 11:52
Radium 228	24	pCi/L		111	70	130	9.0	20	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Revised Date: 12/21/17

Report Date: 07/06/17

Project: CCRR Work Order: B17061389

Analyte		Count Res	ult Uni	ts RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.7						Anal	ytical Run: ICP203-B	_170616A
Lab ID:	ICV	10 Continuin	g Calibratio	n Verification Standa	ard			06/16/	/17 10:53
Barium		2	.54 mg/	L 0.10	102	95	105		
Beryllium		1	.18 mg/	L 0.010	95	95	105		
Boron		2	.41 mg/	L 0.10	96	95	105		
Cadmium		2	.41 mg/	L 0.010	96	95	105		
Chromium		2	.44 mg/	L 0.050	97	95	105		
Lithium		1	.28 mg/	L 0.10	102	95	105		
Magnesium	n	2	5.0 mg/	L 1.0	100	95	105		
Molybdenu	ım	2	.40 mg/	L 0.10	96	95	105		
Potassium		2	5.6 mg/	L 1.0	102	95	105		
Sodium		2	5.6 mg/	L 1.0	103	95	105		
Method:	E200.7							Batc	h: 110555
Lab ID:	MB-110555	10 Method B	lank			Run: ICP20	03-B_170616A	06/17/	/17 04:20
Barium			ND mg/	L 0.0005			_		
Beryllium			ND mg/	L 0.0001					
Boron			ND mg/						
Cadmium			ND mg/						
Chromium			ND mg/						
Lithium		0.0	006 mg/						
Magnesium	n		ND mg/						
Molybdenu	ım		ND mg/						
Potassium			ND mg/	L 0.07					
Sodium			ND mg/						
Lab ID:	LCS-110555	10 Laborator	y Control S	ample		Run: ICP20	3-B_170616A	06/17/	/17 04:23
Barium		0.4	97 mg/	L 0.10	99	85	115		
Beryllium		0.2	246 mg/	L 0.010	99	85	115		
Boron		0.4	64 mg/	L 0.10	93	85	115		
Cadmium		0.2	253 mg/	L 0.010	101	85	115		
Chromium		0.4	83 mg/	L 0.050	97	85	115		
Lithium		0.5	31 mg/	L 0.10	105	85	115		
Magnesium	n	2	6.2 mg/	L 1.0	105	85	115		
Molybdenu	ım	0.5	504 mg/	L 0.10	101	85	115		
Potassium		2	6.3 mg/	L 1.0	105	85	115		
Sodium		2	6.3 mg/	L 1.0	105	85	115		
Lab ID:	B17061389-001BMS3	3 10 Sample M	latrix Spike			Run: ICP20)3-B_170616A	06/17/	/17 04:37
Barium		0.5	552 mg/	L 0.050	99	70	130		
Beryllium		0.2	252 mg/	L 0.0014	101	70	130		
Boron		1	.24 mg/		102	70	130		
Cadmium		0.2			100	70	130		
Chromium		0.4	78 mg/		96	70	130		
Lithium		1	.97 mg/		93	70	130		
Magnesium	n	1	91 mg/			70	130		Α
Molybdenu	m	0.5	500 mg/	L 0.071	100	70	130		

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17

Report Date: 07/06/17 Project: CCRR Work Order: B17061389

Analyte	Count R	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch	n: 110555
Lab ID: B17061389-001BMS	3 10 Sample	e Matrix	Spike			Run: ICP20	3-B_170616A		06/17/	17 04:37
Potassium		82.4	mg/L	1.0	98	70	130			
Sodium		1410	mg/L	4.2		70	130			Α
Lab ID: B17061389-001BMS	SD 10 Sample	e Matrix	Spike Duplicate			Run: ICP20	3-B_170616A		06/17/	17 04:41
Barium		0.566	mg/L	0.050	102	70	130	2.5	20	
Beryllium		0.259	mg/L	0.0014	103	70	130	2.4	20	
Boron		1.26	mg/L	0.050	105	70	130	1.5	20	
Cadmium		0.258	mg/L	0.0099	103	70	130	2.7	20	
Chromium		0.480	mg/L	0.020	96	70	130	0.5	20	
Lithium		2.02	mg/L	0.10	102	70	130	2.2	20	
Magnesium		195	mg/L	1.0		70	130	2.0	20	Α
Molybdenum		0.497	mg/L	0.071	99	70	130	0.5	20	
Potassium		84.3	mg/L	1.0	105	70	130	2.2	20	
Sodium		1440	mg/L	4.2		70	130	2.4	20	Α
Lab ID: B17061403-002AMS	3 10 Sample	e Matrix	Spike			Run: ICP20	3-B_170616A		06/17/	17 05:55
Barium		0.557	mg/L	0.050	98	70	130			
Beryllium		0.252	mg/L	0.0010	101	70	130			
Boron		0.609	mg/L	0.050	99	70	130			
Cadmium		0.243	mg/L	0.0020	97	70	130			
Chromium		0.464	mg/L	0.0050	93	70	130			
Lithium		0.586	mg/L	0.10	105	70	130			
Magnesium		50.5	mg/L	1.0	107	70	130			
Molybdenum		0.488	mg/L	0.014	98	70	130			
Potassium		96.2	mg/L	1.0	102	70	130			
Sodium		180	mg/L	1.0		70	130			Α
Lab ID: B17061403-002AMS	D 10 Sample	e Matrix	Spike Duplicate			Run: ICP20	3-B_170616A		06/17/	17 05:58
Barium		0.553	mg/L	0.050	97	70	130	0.7	20	
Beryllium		0.246	mg/L	0.0010	98	70	130	2.4	20	
Boron		0.607	mg/L	0.050	98	70	130	0.3	20	
Cadmium		0.248	mg/L	0.0020	99	70	130	1.8	20	
Chromium		0.468	mg/L	0.0050	94	70	130	0.7	20	
Lithium		0.577	mg/L	0.10	103	70	130	1.5	20	
Magnesium		48.9	mg/L	1.0	101	70	130	3.2	20	
Molybdenum		0.498	mg/L	0.014	100	70	130	1.9	20	
Potassium		94.2	mg/L	1.0	95	70	130	2.1	20	
Sodium		176	mg/L	1.0		70	130	2.1	20	Α

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Project: CCRR

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 07/06/17
Work Order: B17061389

Revised Date: 12/21/17

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							An	alytical Rui	n: ICP203-B	_170619A
Lab ID:	ICV	7 Co	ntinuing Cal	ibration V	erification Standa/	rd				06/19	/17 12:09
Barium			2.46	mg/L	0.10	98	95	105			
Cadmium			2.41	mg/L	0.010	96	95	105			
Calcium			24.5	mg/L	1.0	98	95	105			
Cobalt			2.36	mg/L	0.020	95	95	105			
Lithium			1.29	mg/L	0.10	103	95	105			

Littiiuiii		1.23	IIIg/L	0.10	103	90	105			
Magnesiun	n	24.7	mg/L	1.0	99	95	105			
Potassium		25.6	mg/L	1.0	102	95	105			
Method:	E200.7								Batch	: 110555
Lab ID:	MB-110555	7 Method Blank			R	Run: ICP203-E	3_170619A		06/20/	17 00:20
Barium		ND	mg/L	0.0005						
Cadmium		ND	mg/L	0.0010						
Calcium		ND	mg/L	0.08						
Cobalt		ND	mg/L	0.005						
Lithium		0.006	mg/L	0.004						
Magnesiun	n	ND	mg/L	0.01						
Potassium		ND	mg/L	0.07						
Lab ID:	LCS-110555	7 Laboratory Cor	ntrol Sample		R	Run: ICP203-E	3_170619A		06/20/	17 00:24
Barium		0.502	mg/L	0.10	100	85	115			
Cadmium		0.273	mg/L	0.010	109	85	115			
Calcium		26.4	mg/L	1.0	106	85	115			
Cobalt		0.542	mg/L	0.050	108	85	115			
Lithium		0.529	mg/L	0.10	105	85	115			
Magnesiun	n	26.5	mg/L	1.0	106	85	115			
Potassium		26.1	mg/L	1.0	104	85	115			
Lab ID:	B17061389-001BMS3	7 Sample Matrix	Spike		R	Run: ICP203-E	3_170619A		06/20/	17 00:38
Barium		0.541	mg/L	0.050	98	70	130			
Cadmium		0.257	mg/L	0.0099	103	70	130			
Calcium		689	mg/L	1.0		70	130			Α
Cobalt		0.532	mg/L	0.052	106	70	130			
Lithium		1.89	mg/L	0.10	94	70	130			
Magnesiun	n	186	mg/L	1.0		70	130			Α
Potassium		78.5	mg/L	1.0	101	70	130			
Lab ID:	B17061389-001BMSD	7 Sample Matrix	Spike Duplic	cate	R	Run: ICP203-E	3_170619A		06/20/	17 00:41
Barium		0.549	mg/L	0.050	99	70	130	1.3	20	
Cadmium		0.264	mg/L	0.0099	106	70	130	2.7	20	
Calcium		690	mg/L	1.0		70	130	0.1	20	Α
Cobalt		0.529	mg/L	0.052	106	70	130	0.6	20	
Lithium		1.92	mg/L	0.10	100	70	130	1.6	20	
Magnesiun	n	187	mg/L	1.0		70	130	0.3	20	Α
Potassium		79.5	mg/L	1.0	104	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Revised Date: 12/21/17 **Report Date:** 07/06/17

Work Order: B17061389

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS202-B	_170622A
Lab ID:	QCS	3 Init	tial Calibratio	n Verificat	tion Standard					06/22	/17 19:30
Beryllium			0.0251	mg/L	0.0010	100	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Thallium			0.0495	mg/L	0.10	99	90	110			
Method:	E200.8									Batc	h: 110555
Lab ID:	MB-110555	3 Ме	thod Blank				Run: ICPM	S202-B_170622A		06/23/	/17 00:33
Beryllium			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00005						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-110555	3 La	boratory Cor	ntrol Samp	le		Run: ICPM	S202-B_170622A		06/23/	/17 00:38
Beryllium			0.225	mg/L	0.0010	90	85	115			
Lead			0.512	mg/L	0.0010	102	85	115			
Thallium			0.460	mg/L	0.00050	92	85	115			
Lab ID:	B17061389-001BMS	3 3 Sa	mple Matrix	Spike			Run: ICPM	S202-B_170622A		06/23/	/17 00:41
Beryllium			0.221	mg/L	0.0010	88	70	130			
Lead			0.517	mg/L	0.0010	103	70	130			
Thallium			0.470	mg/L	0.00071	94	70	130			
Lab ID:	B17061389-001BMS	D 3 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S202-B_170622A		06/23/	/17 00:43
Beryllium			0.220	mg/L	0.0010	88	70	130	0.4	20	
Lead			0.510	mg/L	0.0010	101	70	130	1.5	20	
Thallium			0.461	mg/L	0.00071	92	70	130	2.0	20	
Lab ID:	B17061403-002AMS	3 3 Sa	mple Matrix	Spike			Run: ICPM	S202-B_170622A		06/23/	/17 01:29
Beryllium			0.218	mg/L	0.0010	87	70	130			
Lead			0.525	mg/L	0.0010	105	70	130			
Thallium			0.479	mg/L	0.00050	96	70	130			
Lab ID:	B17061403-002AMSI	D 3 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S202-B_170622A		06/23/	/17 01:31
Beryllium			0.213	mg/L	0.0010	85	70	130	2.0	20	
Lead			0.522	mg/L	0.0010	104	70	130	0.7	20	
Thallium			0.468	mg/L	0.00050	94	70	130	2.3	20	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Revised Date: 12/21/17 **Report Date:** 07/06/17

Work Order: B17061389

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: IC	CPMS206-B	_170619A
Lab ID:	QCS	9 Init	ial Calibratio	on Verificatio	on Standard					06/20/	17 06:13
Antimony			0.0493	mg/L	0.050	99	90	110			
Arsenic			0.0477	mg/L	0.0050	95	90	110			
Cadmium			0.0251	mg/L	0.0010	101	90	110			
Chromium			0.0475	mg/L	0.010	95	90	110			
Cobalt			0.0491	mg/L	0.010	98	90	110			
Lead			0.0482	mg/L	0.010	96	90	110			
Molybdenu	m		0.0463	mg/L	0.0050	93	90	110			
Selenium			0.0493	mg/L	0.0050	99	90	110			
Thallium			0.0494	mg/L	0.10	99	90	110			
Method:	E200.8									Batcl	h: 110555
Lab ID:	MB-110555	9 Me	thod Blank				Run: ICPM	S206-B_170619A		06/20/	17 13:33
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			0.00004	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	m		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.00002	mg/L	7E-06						
Lab ID:	LCS-110555	9 Lab	oratory Co	ntrol Sample	!		Run: ICPM	S206-B_170619A		06/20/	17 13:39
Antimony			0.513	mg/L	0.0010	103	85	115			
Arsenic			0.495	mg/L	0.0010	99	85	115			
Cadmium			0.253	mg/L	0.0010	101	85	115			
Chromium			0.478	mg/L	0.0050	96	85	115			
Cobalt			0.498	mg/L	0.0050	100	85	115			
Lead			0.491	mg/L	0.0010	98	85	115			
Molybdenu	m		0.481	mg/L	0.0010	96	85	115			
Selenium			0.490	mg/L	0.0010	98	85	115			
Thallium			0.479	mg/L	0.00050	96	85	115			
Lab ID:	B17061389-001BMS3	3 9 Saı	mple Matrix	Spike			Run: ICPM	S206-B_170619A		06/20/	17 13:43
Antimony			0.474	mg/L	0.0010	95	70	130			
Arsenic			0.489	mg/L	0.0010	96	70	130			
Cadmium			0.238	mg/L	0.0010	95	70	130			
Chromium			0.474	mg/L	0.0050	95	70	130			
Cobalt			0.468	mg/L	0.0050	93	70	130			
Lead			0.464	mg/L	0.0010	92	70	130			
Molybdenu	m		0.469	mg/L	0.0010	94	70	130			
Selenium			0.504	mg/L	0.0018	101	70	130			
Thallium			0.456	mg/L	0.00050	91	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Revised Date: 12/21/17

QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:07/06/17Project:CCRRWork Order:B17061389

RL %REC Low Limit High Limit Result Units **Analyte** Count **RPD RPDLimit** Qual Batch: 110555 Method: E200.8 Lab ID: B17061389-001BMSD 9 Sample Matrix Spike Duplicate Run: ICPMS206-B 170619A 06/20/17 13:46 102 Antimony 0.510 mg/L 0.0010 70 130 7.5 20 Arsenic 0.529 mg/L 0.0010 70 130 7.9 20 104 0.252 70 Cadmium mg/L 0.0010 101 130 5.6 20 Chromium 0.506 mg/L 0.0050 101 70 130 6.6 20 Cobalt 0.512 mg/L 0.0050 102 70 130 9.0 20 Lead 0.518 mg/L 0.0010 103 70 130 11 20 Molybdenum 0.512 mg/L 0.0010 102 70 130 8.7 20 0.514 103 70 2.2 20 Selenium 0.0018 130 mg/L Thallium 0.497 mg/L 0.00050 70 130 8.6 20 Lab ID: B17061403-002AMS3 9 Sample Matrix Spike Run: ICPMS206-B 170619A 06/20/17 15:10 Antimony 0.488 0.0010 97 70 130 mq/L 0.475 70 Arsenic mg/L 0.0010 95 130 Cadmium 0.240 mg/L 0.0010 96 70 130 0.469 70 Chromium mg/L 0.0050 94 130 Cobalt 0.483 mg/L 0.0050 96 70 130 Lead 0.460 mg/L 0.0010 92 70 130 0.467 0.0010 93 70 130 Molybdenum mg/L Selenium 0.487 mg/L 0.0010 97 70 130 Thallium 0.455 mg/L 0.00050 91 70 130 Lab ID: B17061403-002AMSD 9 Sample Matrix Spike Duplicate Run: ICPMS206-B 170619A 06/20/17 15:14 Antimony 0.493 0.0010 99 70 1.2 20 mg/L 130 Arsenic 0.470 mg/L 0.0010 94 70 130 1.0 20 0.238 70 0.7 20 Cadmium mg/L 0.0010 95 130 Chromium 70 0.467 mg/L 0.0050 93 130 0.6 20 Cobalt 100 70 3.4 20 0.499 mg/L 0.0050 130 Lead 0.469 mg/L 0.0010 94 70 130 1.9 20 2.2 Molybdenum 0.478 mg/L 0.0010 95 70 130 20 mg/L Selenium 0.486 0.0010 97 70 130 0.1 20 Thallium 0.471 mg/L 0.00050 94 70 130 3.4 20

Revised Date: 12/21/17

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 07/06/17 Project: CCRR Work Order: B17061389

Analyte		Count Res	ult Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1						Analytica	al Run:	HGCV202-B	_170619A
Lab ID:	ICV	Initial Cali	bration Verific	ation Standard					06/19	/17 14:20
Mercury		0.001	193 mg/L	0.00010	97	90	110			
Method:	E245.1								Batc	h: 110626
Lab ID:	MB-110626	Method B	lank			Run: HGC\	/202-B_170619A		06/19	/17 14:26
Mercury		0.000	001 mg/L	6E-06						
Lab ID:	LCS-110626	Laborator	y Control Sam	iple		Run: HGC\	/202-B_170619A		06/19	/17 14:28
Mercury		0.001	194 mg/L	0.00010	96	85	115			
Lab ID:	B17061363-001EMS	Sample M	latrix Spike			Run: HGC\	/202-B_170619A		06/19	/17 14:32
Mercury		0.002	202 mg/L	0.00010	100	70	130			
Lab ID:	B17061363-001EMS	D Sample M	latrix Spike Di	uplicate		Run: HGC\	/202-B_170619A		06/19	/17 14:34
Mercury		0.002	202 mg/L	0.00010	101	70	130	0.2	30	
Lab ID:	B17061476-004BMS	Sample M	latrix Spike			Run: HGC\	/202-B_170619A		06/19	/17 15:15
Mercury		0.01	182 mg/L	0.00050	90	70	130			
Lab ID:	B17061476-004BMS	D Sample M	latrix Spike Dı	uplicate		Run: HGC\	/202-B_170619A		06/19	/17 15:17
Mercury		0.01	184 mg/L	0.00050	91	70	130	1.2	30	
Method:	E245.1						Analytica	al Run:	HGCV202-B	_170621A
Lab ID:	ICV	Initial Cali	bration Verific	ation Standard					06/21	/17 09:52
Mercury		0.002	200 mg/L	0.00010	100	90	110			
Method:	E245.1								Batc	h: 110731
Lab ID:	MB-110731	Method B	lank			Run: HGC\	/202-B_170621A		06/21	/17 11:20
Mercury		0.000	002 mg/L	6E-06						
Lab ID:	LCS-110731	Laborator	y Control Sam	iple		Run: HGC\	/202-B_170621A		06/21	/17 11:22
Mercury		0.002	207 mg/L	0.00010	102	85	115			
Lab ID:	B17061648-004BMS	Sample M	latrix Spike			Run: HGC\	/202-B_170621A		06/21	/17 11:46
Mercury		0.002	207 mg/L	0.00010	103	70	130			
Lab ID:	B17061648-004BMS	D Sample M	latrix Spike Di	ıplicate		Run: HGC\	/202-B_170621A		06/21	/17 11:48
Mercury		0.002	213 mg/L	0.00010	106	70	130	3.0	30	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/28/17Project:CCRRWork Order:B17061389

Analyte	C	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A2540 C									Batch	n: 110591
Lab ID:	MB-110591	Met	hod Blank				Run: BAL#	SD-15_170615D		06/15/	17 08:15
Solids, T	otal Dissolved TDS @ 180	С	ND	mg/L	4						
Lab ID:	LCS-110591	Lab	oratory Con	trol Sample			Run: BAL #	SD-15_170615D		06/15/	17 08:16
Solids, T	otal Dissolved TDS @ 180	С	983	mg/L	10	99	90	110			
Lab ID:	B17061344-003B DUP	San	nple Duplica	ate			Run: BAL #	SD-15_170615D		06/15/	17 08:17
Solids, T	otal Dissolved TDS @ 180	С	52.7	mg/L	10				0.4	5	
Lab ID:	B17061389-006A DUP	San	nple Duplica	ate			Run: BAL #	SD-15_170615D		06/15/	17 08:19
Solids, T	otal Dissolved TDS @ 180	С	5.98	mg/L	10					5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/28/17Project:CCRRWork Order:B17061389

Analyte		Count Res	sult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170616A
Lab ID:	ICV	Initial Ca	libratio	n Verification Stan	dard					06/16/	17 08:54
Fluoride		1	1.02	mg/L	0.10	102	90	110			
Method:	A4500-F C									Batch:	R281619
Lab ID:	MBLK	Method E	Blank				Run: MAN-	TECH_170616A		06/16/	17 08:49
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Laborato	ry Fort	ified Blank			Run: MAN-	TECH_170616A		06/16/	17 08:51
Fluoride		1	1.01	mg/L	0.10	101	90	110			
Lab ID:	B17061377-001AMS	Sample I	Matrix :	Spike			Run: MAN-	TECH_170616A		06/16/	17 09:43
Fluoride		3	3.40	mg/L	0.10	98	80	120			
Lab ID:	B17061377-001AMS	D Sample I	Matrix :	Spike Duplicate			Run: MAN-	TECH_170616A		06/16/	17 09:45
Fluoride		3	3.35	mg/L	0.10	93	80	120	1.5	10	
Lab ID:	B17061389-010AMS	Sample I	Matrix :	Spike			Run: MAN-	TECH_170616A		06/16/	17 11:25
Fluoride		1	1.45	mg/L	0.10	66	80	120			S
Lab ID:	B17061389-010AMS	D Sample I	Matrix :	Spike Duplicate			Run: MAN-	TECH_170616A		06/16/	17 11:31
Fluoride		1	1.44	mg/L	0.10	65	80	120	0.7	10	S

Qualifiers:



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/28/17Project:CCRRWork Order:B17061389

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: Pl	HSC _101-B_	_170615A
Lab ID:	pH 8	Initi	al Calibratio	n Verifica	ation Standard					06/15/	/17 08:40
рН			7.99	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R281480
Lab ID:	B17061388-001ADUF	P San	nple Duplica	ate			Run: PHSC	_101-B_17061	15A	06/15/	/17 11:01
рН			7.91	s.u.	0.10				0.1	3	
Lab ID:	B17061389-003ADUF	S an	nple Duplica	ate			Run: PHSC	_101-B_17061	15A	06/15/	/17 11:30
рН			5.87	s.u.	0.10				0.2	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:06/28/17Project:CCRRWork Order:B17061389

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical I	Run: IC M	IETROHM 1	_170620A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification	Standard					06/20	/17 10:14
Chloride			2.25	mg/L	1.0	100	90	110			
Sulfate			9.05	mg/L	1.0	101	90	110			
Method:	E300.0									Batch:	R281841
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_170	620A	06/20	/17 10:34
Chloride			ND	mg/L	0.009						
Sulfate			ND	mg/L	0.01						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 1_170	620A	06/20	/17 10:53
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			30.6	mg/L	1.0	102	90	110			
Lab ID:	B17061355-003AMS	2 Sai	mple Matrix	Spike			Run: IC ME	TROHM 1_170	620A	06/21	/17 01:30
Chloride			52.9	mg/L	1.0	105	90	110			
Sulfate			272	mg/L	1.0	104	90	110			
Lab ID:	B17061355-003AMSI	D 2 Saı	mple Matrix	Spike Duplica	te		Run: IC ME	TROHM 1_170	620A	06/21	/17 01:50
Chloride			53.1	mg/L	1.0	105	90	110	0.3	20	
Sulfate			272	mg/L	1.0	104	90	110	0.0	20	
Method:	E300.0							Analytical I	Run: IC M	IETROHM 2	_170620A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification	Standard					06/20	/17 13:03
Chloride			2.23	mg/L	1.0	99	90	110			
Sulfate			9.00	mg/L	1.0	100	90	110			
Method:	E300.0									Batch:	R281847
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_170	620A	06/20	/17 13:23
Chloride			ND	mg/L	0.002						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lat	oratory For	tified Blank			Run: IC ME	TROHM 2_170	0620A	06/20	/17 13:42
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			30.6	mg/L	1.0	102	90	110			
Lab ID:	B17061389-008AMS	2 Sai	mple Matrix	Spike			Run: IC ME	TROHM 2_170	0620A	06/20	/17 14:41
Chloride			1050	mg/L	3.1	101	90	110			
Sulfate			3270	mg/L	9.2	99	90	110			
Lab ID:	B17061389-008AMSI	D 2 Sai	mple Matrix	Spike Duplica	te		Run: IC ME	TROHM 2_170)620A	06/20	/17 15:00
Chloride	_		1050	mg/L	3.1	101	90	110	0.2	20	
				-							

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

B17061389

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Tabitha Edwards Date Received: 6/14/2017 Reviewed by: Received by: rs4 BL2000\gmccartney Carrier name: FedEx Reviewed Date: 6/17/2017 Shipping container/cooler in good condition? Yes √ No □ Not Present □ Custody seals intact on all shipping container(s)/cooler(s)? Yes √ No 🔲 Not Present Custody seals intact on all sample bottles? Not Present ✓ No 🔲 Yes Chain of custody present? Yes √ No □ Chain of custody signed when relinquished and received? Yes √ No 🔲 Chain of custody agrees with sample labels? Yes √ No 🔲 Samples in proper container/bottle? Yes √ No □ Sample containers intact? Yes √ No 🗌 Sufficient sample volume for indicated test? Yes √ No 🗌 All samples received within holding time? Yes √ No 🗌 (Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.) Temp Blank received in all shipping container(s)/cooler(s)? Not Applicable Yes √ No 🔲 Container/Temp Blank temperature: °C On Ice Water - VOA vials have zero headspace? No VOA vials submitted Yes No □ Water - pH acceptable upon receipt? Yes √ No 🗌 Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 3.9°C, shipping container 2 was 2.6°C and shipping container 3 was 3.4°C,



Contact Phone

Email

Chain of Custody & Analytical Request Record

Comments Report Information (if different than Account Information) □ LEYEL IV □ NELAC □ EDD/EDT (contact laboratory) □ Other www.energylab.com Receive Report DHard Copy DEmail Company/Name Mailing Address City, State, Zip Contact Phone Email K mail #375 Bottle Order greg. sellert @ amectus can Mailing Address 3755 S. Capital of TX CompanyName Amec Foster Wheeler Austin, TX 78704 Account Information (Billing information) 512-795-0360 Receive Invoice XIHard Copy (Email Quote Grea Seifert City, State, Zip Purchase Order

MUST be contacted prior to RUSH sample submittal for standard unless marked as GIND61389-00 charges and scheduling -All turnaround times are See Instructions Page Energy Laboratories - TILABID Lebosion (14 Only See Attached **Analysis Requested** Matrix (See Codes Matrix Codes B - Bioassay V - Vegetation \mathcal{Z} O - Other DW - Drinking Sails/ Salids W- Water A-Air Number of Containers CCRR 1450 Project **%** Time Sampler Phone 512-241-2321 ☐ Unprocessed ore (NOT ground or refined)* Project Name, PWSID, Permit, etc Client:
Fra Municipal Power Agency EPA/State Compliance 100/198 112/17 Date MINING CLIENTS, please indicate sample type.
*If ore has been processed or refined, call before sending. Sample Identification (Name, Location, Interval, etc.) AP MW-Sampler Name B. G. icschman Project Information □ Byproduct 11 (e)2 material AP MW-6 Sample Origin State SSP/

000/1/6/19	
1005 JANN-18	3
9 APM ul-2	300
/430	CW
10	3
> > > >	0/0
DateTime	
(MAN 6/18/17 2) 18:15	Date/Time Signature
Data Time Signature	
5	Parloffing / C . LI Signature
1	
Cooler IU(s) Custody Seals Intact Receipt Temp Temp Blank On Ice	14 24 25 27 27 27 27
V N CC Cas	Amount Receipt Number (cashcheck only)

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B

808

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605

770

APMW-4

1858

EQBK/SCM/06/217

APMW-5 4PMW-3

SFL MW-6

183

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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17061657

Project Name: CCRR

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Energy Laboratories Inc Billings MT received the following 19 samples for Texas Municipal Power Agency on 6/16/2017 for analysis.										
Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test					
D470040E7 004		00404745	. 40 00/40/47	O I \ \ \ \ I - \ I	M-4-1- I IOD/IODMO T-4 D					

Quote ID: B3997

B17061657-001	APMW-1D	06/13/17 15:40 06/16/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Solids, Total Dissolved
B17061657-003	SSP MW-3	06/13/17 18:25 06/16/17	Ground Water	Same As Above
B17061657-004	EQBK/SCM/061317	06/13/17 19:15 06/16/17	Ground Water	Same As Above
B17061657-005	DUP-2	06/13/17 0:00 06/16/17	Ground Water	Same As Above
B17061657-006	SFL MW-5	06/14/17 10:30 06/16/17	Ground Water	Same As Above
B17061657-007	SSP MW-2	06/14/17 10:34 06/16/17	Ground Water	Same As Above
B17061657-008	SFL MW-2	06/14/17 11:30 06/16/17	Ground Water	Same As Above
B17061657-009	SSP MW-4	06/14/17 11:49 06/16/17	Ground Water	Same As Above
B17061657-010	EQBK-BJG-061417	06/14/17 12:55 06/16/17	Ground Water	Same As Above
B17061657-011	EQBK/SCM/061417	06/14/17 12:55 06/16/17	Ground Water	Same As Above
B17061657-013	MNW-15	06/14/17 14:20 06/16/17	Ground Water	Same As Above
B17061657-015	SFL MW-7	06/14/17 15:30 06/16/17	Ground Water	Same As Above
B17061657-017	SFL MW-3	06/14/17 16:50 06/16/17	Ground Water	Same As Above
B17061657-018	SFL MW-4	06/14/17 17:45 06/16/17	Ground Water	Same As Above
B17061657-019	DUP-3	06/14/17 0:00 06/16/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CCRR

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 07/06/17

Work Order: B17061657 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

Project:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061657-001 Client Sample ID: APMW-1D

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/13/17 15:40

> DateReceived: 06/16/17 Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	71	mg/L		1		E200.7	06/21/17 03:17 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 03:17 / rlh
Potassium		mg/L		1		E200.7	06/21/17 03:17 / rlh
Sodium		mg/L		1		E200.7	06/21/17 03:17 / rlh
PHYSICAL PROPERTIES		Ü					
pH	6.1	s.u.	Н	0.1		A4500-H B	06/16/17 14:29 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	20		A2540 C	06/16/17 13:53 / rik
	1010	9/ =	٥	20		7120100	00/10/11 10:00 / III
INORGANICS							
Chloride		mg/L		1		E300.0	06/22/17 20:46 / mej
Sulfate		mg/L	D	4		E300.0	06/22/17 20:46 / mej
Fluoride	0.6	mg/L		0.1		A4500-F C	06/21/17 15:20 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 01:15 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 01:15 / jpv
Barium	0.01	mg/L		0.01		E200.7	06/21/17 03:17 / rlh
Beryllium	ND	mg/L		0.001		E200.7	06/21/17 03:17 / rlh
Boron	4.59	mg/L		0.05		E200.7	06/21/17 03:17 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/21/17 03:17 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/21/17 03:17 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/21/17 03:17 / rlh
Lead	ND	mg/L		0.01		E200.8	06/23/17 01:15 / jpv
Lithium	0.04	mg/L		0.01		E200.7	06/21/17 03:17 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:09 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/21/17 03:17 / rlh
Selenium	ND	mg/L		0.01		E200.8	06/23/17 01:15 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 17:16 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.37	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 228	0.37	pCi/L	U			RA-05	06/29/17 12:24 / eli-ca
Radium 228 precision (±)	0.94	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	06/29/17 12:24 / eli-ca
Radium 226 + Radium 228		pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-003 Client Sample ID: SSP MW-3 Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/13/17 18:25
DateReceived: 06/16/17

MCL/ QCL **Analyses** Result Units Qualifiers RL Method Analysis Date / By **MAJOR IONS** Calcium 673 mg/L 1 E200.7 06/21/17 03:46 / rlh 172 mg/L 1 E200.7 06/21/17 03:46 / rlh Magnesium Potassium 47 mg/L 1 E200.7 06/21/17 03:46 / rlh Sodium 1050 mg/L D 4 E200.7 06/21/17 03:46 / rlh **PHYSICAL PROPERTIES** 4.5 s.u. Н 0.1 A4500-H B 06/16/17 14:35 / pjw рΗ Solids, Total Dissolved TDS @ 180 C 06/16/17 13:54 / rik 6370 mg/L D 100 A2540 C **INORGANICS** 1810 mg/L D 6 E300.0 06/22/17 22:43 / mej Chloride Sulfate 2510 mg/L D 20 E300.0 06/22/17 22:43 / mei A4500-F C Fluoride 0.7 mg/L 0.1 06/21/17 15:36 / cjm **METALS, TOTAL RECOVERABLE** Antimony ND mg/L 0.006 E200.8 06/23/17 01:51 / jpv Arsenic ND mg/L 0.01 E200.8 06/23/17 01:51 / jpv Barium 0.02 mg/L 0.01 E200.7 06/21/17 03:46 / rlh Beryllium 0.116 mg/L 0.001 E200.8 06/27/17 17:42 / jpv 2.84 mg/L 0.05 E200.7 06/21/17 03:46 / rlh Boron 0.066 mg/L 0.005 Cadmium F2008 06/23/17 01:51 / jpv Chromium ND mg/L 0.01 F200 8 06/23/17 01:51 / jpv Cobalt 0.56 mg/L 0.02 E200.8 06/23/17 01:51 / jpv 06/27/17 17:42 / jpv Lead ND mg/L 0.01 E200.8 D Lithium 0.67 mg/L 0.04 E200.7 06/21/17 03:46 / rlh Mercury ND mg/L 0.001 E245.1 06/21/17 12:20 / jh Molybdenum ND mg/L 0.05 E200.8 06/23/17 01:51 / jpv Selenium ND mg/L 0.01 E200.8 06/23/17 01:51 / jpv Thallium 0.010 mg/L 0.002 E200.8 06/27/17 17:42 / jpv **RADIONUCLIDES - TOTAL** Radium 226 7.1 pCi/L E903.0 07/04/17 11:15 / eli-ca Radium 226 precision (±) 1.4 pCi/L E903.0 07/04/17 11:15 / eli-ca Radium 226 MDC 0.20 pCi/L E903.0 07/04/17 11:15 / eli-ca Radium 228 21 pCi/L **RA-05** 06/29/17 13:25 / eli-ca Radium 228 precision (±) 4.0 pCi/L **RA-05** 06/29/17 13:25 / eli-ca 1.7 pCi/L Radium 228 MDC **RA-05** 06/29/17 13:25 / eli-ca Radium 226 + Radium 228 28.4 pCi/L A7500-RA 07/05/17 09:40 / eli-ca Radium 226 + Radium 228 precision (±) 4.3 pCi/L A7500-RA 07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

Radium 226 + Radium 228 MDC

MDO Minimum data table and

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

1.7 pCi/L

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

A7500-RA

07/05/17 09:40 / eli-ca

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-004 **Client Sample ID:** EQBK/SCM/061317

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/13/17 19:15
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/21/17 03:49 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 03:49 / rlh
Potassium		mg/L		1		E200.7	06/21/17 03:49 / rlh
Sodium		mg/L		1		E200.7	06/21/17 03:49 / rlh
PHYSICAL PROPERTIES		Ţ					
pH	5.9	s.u.	Н	0.1		A4500-H B	06/16/17 14:37 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	••	10		A2540 C	06/16/17 13:54 / rik
		3					
INORGANICS							
Chloride		mg/L		1		E300.0	06/22/17 23:02 / mej
Sulfate		mg/L		1		E300.0	06/22/17 23:02 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	06/21/17 15:48 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 01:54 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 01:54 / jpv
Barium	ND	mg/L		0.01		E200.7	06/21/17 03:49 / rlh
Beryllium	ND	mg/L		0.001		E200.7	06/21/17 03:49 / rlh
Boron	ND	mg/L		0.05		E200.7	06/21/17 03:49 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/21/17 03:49 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/21/17 03:49 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/21/17 03:49 / rlh
Lead	ND	mg/L		0.01		E200.8	06/27/17 17:44 / jpv
Lithium	ND	mg/L		0.01		E200.7	06/21/17 03:49 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:26 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/21/17 03:49 / rlh
Selenium		mg/L		0.01		E200.8	06/23/17 01:54 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 17:44 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.11	pCi/L	U			E903.0	07/04/17 11:15 / eli-ca
Radium 226 precision (±)	0.13	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 228	0.33	pCi/L	U			RA-05	06/29/17 13:25 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	06/29/17 13:25 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	06/29/17 13:25 / eli-ca
Radium 226 + Radium 228	0.4	pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061657-005

Client Sample ID: DUP-2

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/13/17 DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	710	mg/L		1		E200.7	06/21/17 03:53 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 03:53 / rlh
Potassium		mg/L		1		E200.7	06/21/17 03:53 / rlh
Sodium		mg/L	D	4		E200.7	06/21/17 03:53 / rlh
PHYSICAL PROPERTIES							
pH	4.5	s.u.	Н	0.1		A4500-H B	06/17/17 14:29 / pjw
Solids, Total Dissolved TDS @ 180 C	6430	mg/L	D	100		A2540 C	06/16/17 13:54 / rik
INORGANICS							
Chloride	1810	mg/L	D	6		E300.0	06/22/17 23:22 / mej
Sulfate		mg/L	D	20		E300.0	06/22/17 23:22 / mej
Fluoride		mg/L	_	0.1		A4500-F C	06/21/17 15:55 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 01:58 / jpv
Arsenic		mg/L		0.01		E200.8	06/23/17 01:58 / jpv
Barium		mg/L		0.01		E200.7	06/21/17 03:53 / rlh
Beryllium		mg/L		0.001		E200.8	06/27/17 17:47 / jpv
Boron	2.93	mg/L		0.05		E200.7	06/21/17 03:53 / rlh
Cadmium	0.065	mg/L		0.005		E200.8	06/23/17 01:58 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/23/17 01:58 / jpv
Cobalt	0.56	mg/L		0.02		E200.8	06/23/17 01:58 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 17:47 / jpv
Lithium	0.70	mg/L	D	0.04		E200.7	06/21/17 03:53 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:28 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 01:58 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 01:58 / jpv
Thallium	0.010	mg/L		0.002		E200.8	06/27/17 17:47 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	7.0	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 precision (±)	1.4	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 228	25	pCi/L				RA-05	06/29/17 13:25 / eli-ca
Radium 228 precision (±)	4.8	pCi/L				RA-05	06/29/17 13:25 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	06/29/17 13:25 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-006 Client Sample ID: SFL MW-5

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 10:30
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	899	mg/L	D	2		E200.7	06/21/17 03:56 / rlh
Magnesium		mg/L	_	1		E200.7	06/21/17 03:56 / rlh
Potassium		mg/L		1		E200.7	06/21/17 03:56 / rlh
Sodium		mg/L	D	8		E200.7	06/21/17 03:56 / rlh
PHYSICAL PROPERTIES							
pH	4.8	s.u.	Н	0.1		A4500-H B	06/16/17 17:40 / pjw
Solids, Total Dissolved TDS @ 180 C	7600	mg/L	D	90		A2540 C	06/17/17 07:58 / rik
INORGANICS							
Chloride	3160	mg/L	D	10		E300.0	06/22/17 23:42 / mej
Sulfate		mg/L	D	40		E300.0	06/22/17 23:42 / mej
Fluoride		mg/L	5	0.1		A4500-F C	06/21/17 16:02 / cjm
METALS TOTAL DECOVEDABLE		Ü					,
METALS, TOTAL RECOVERABLE	ND	ma/l		0.006		E200 9	06/22/17 02:02 / inv
Antimony Arsenic		mg/L mg/L		0.006 0.01		E200.8 E200.8	06/23/17 02:02 / jpv
Barium		mg/L		0.01		E200.6 E200.7	06/23/17 02:02 / jpv 06/21/17 03:56 / rlh
		mg/L		0.01		E200.7 E200.8	06/27/17 17:49 / jpv
Beryllium Boron		mg/L	D	0.001		E200.6 E200.7	06/21/17 17:49 / jpv 06/21/17 03:56 / rlh
Cadmium		mg/L	Ь	0.07		E200.7	06/23/17 03:30 / IIII 06/23/17 02:02 / jpv
Chromium		mg/L		0.003		E200.8	06/23/17 02:02 / jpv
Cobalt		mg/L		0.01		E200.8	06/23/17 02:02 / jpv
Lead		mg/L		0.01		E200.8	06/27/17 17:49 / jpv
Lithium		mg/L	D	0.09		E200.7	06/21/17 03:56 / rlh
Mercury		mg/L	5	0.001		E245.1	06/21/17 12:30 / jh
Molybdenum		mg/L		0.05		E200.8	06/23/17 02:02 / jpv
Selenium		mg/L		0.01		E200.8	06/23/17 02:02 / jpv
Thallium		mg/L		0.002		E200.8	06/27/17 17:49 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	4.3	pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 226 MDC		pCi/L				E903.0	07/04/17 11:15 / eli-ca
Radium 228		pCi/L				RA-05	06/29/17 13:26 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 13:26 / eli-ca
Radium 228 MDC		pCi/L				RA-05	06/29/17 13:26 / eli-ca
Radium 226 + Radium 228		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
- 							

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military Control Military

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-007 Client Sample ID: SSP MW-2

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 10:34
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	872	mg/L		1		E200.7	06/21/17 04:00 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:00 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:00 / rlh
Sodium	1160	mg/L	D	4		E200.7	06/21/17 04:00 / rlh
PHYSICAL PROPERTIES							
pH	4.6	s.u.	Н	0.1		A4500-H B	06/16/17 17:42 / pjw
Solids, Total Dissolved TDS @ 180 C	6940	mg/L	D	90		A2540 C	06/17/17 07:58 / rik
INORGANICS							
Chloride	2640	mg/L	D	6		E300.0	06/23/17 00:01 / mej
Sulfate	2120	mg/L	D	20		E300.0	06/23/17 00:01 / mej
Fluoride	0.2	mg/L		0.1		A4500-F C	06/21/17 16:09 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:06 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:06 / jpv
Barium	0.03	mg/L		0.01		E200.7	06/21/17 04:00 / rlh
Beryllium	0.030	mg/L		0.001		E200.8	06/27/17 18:00 / jpv
Boron	0.46	mg/L		0.05		E200.7	06/21/17 04:00 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/23/17 02:06 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/23/17 02:06 / jpv
Cobalt	0.06	mg/L		0.02		E200.8	06/23/17 02:06 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:00 / jpv
Lithium	0.95	mg/L	D	0.04		E200.7	06/21/17 04:00 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:32 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 02:06 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:06 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:00 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.89	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.25	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.25	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	1.4	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 precision (±)	0.75	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 226 + Radium 228	2.3	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

ADO Military solution minus

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-008 Client Sample ID: SFL MW-2

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 11:30
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	829	mg/L	D	2		E200.7	06/21/17 04:03 / rlh
Magnesium		mg/L	D	1		E200.7	06/21/17 04:03 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:03 / rlh
Sodium		mg/L	D	8		E200.7	06/21/17 04:03 / rlh
	1000	g/ <u>_</u>	٥	Ü		2200.7	00/21/1/ 01:00/1111
PHYSICAL PROPERTIES							
pH		s.u.	H	0.1		A4500-H B	06/16/17 17:45 / pjw
Solids, Total Dissolved TDS @ 180 C	6940	mg/L	D	90		A2540 C	06/17/17 07:58 / rik
INORGANICS							
Chloride	2910	mg/L	D	10		E300.0	06/23/17 00:21 / mej
Sulfate	1890	mg/L	D	40		E300.0	06/23/17 00:21 / mej
Fluoride	0.3	mg/L		0.1		A4500-F C	06/21/17 16:12 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:09 / jpv
Arsenic		mg/L		0.01		E200.8	06/23/17 02:09 / jpv
Barium		mg/L		0.01		E200.7	06/21/17 04:03 / rlh
Beryllium	0.002	_		0.001		E200.8	06/27/17 18:02 / jpv
Boron	0.51	mg/L	D	0.07		E200.7	06/21/17 04:03 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/23/17 02:09 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/23/17 02:09 / jpv
Cobalt	ND	mg/L		0.02		E200.8	06/23/17 02:09 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:02 / jpv
Lithium	0.59	mg/L	D	0.09		E200.7	06/21/17 04:03 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:34 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 02:09 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:09 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:02 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	3.2	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.68	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	5.3	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 226 + Radium 228	8.4	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military Control Military

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-009 Client Sample ID: SSP MW-4

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 11:49
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	413	mg/L		1		E200.7	06/21/17 04:07 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:07 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:07 / rlh
Sodium		mg/L	D	4		E200.7	06/21/17 04:07 / rlh
PHYSICAL PROPERTIES							
pH	6.5	s.u.	Н	0.1		A4500-H B	06/16/17 17:48 / pjw
Solids, Total Dissolved TDS @ 180 C	3660	mg/L	D	40		A2540 C	06/17/17 07:58 / rik
INORGANICS							
Chloride	1100	mg/L	D	6		E300.0	06/23/17 00:40 / mej
Sulfate		mg/L	D	20		E300.0	06/23/17 00:40 / mej
Fluoride		mg/L	Б	0.1		A4500-F C	06/21/17 16:15 / cjm
	110	mg/L		0.1		74-0001 0	00/21/17 10:10 / Ojiii
METALS, TOTAL RECOVERABLE							
Antimony		mg/L		0.006		E200.8	06/23/17 02:13 / jpv
Arsenic		mg/L		0.01		E200.8	06/23/17 02:13 / jpv
Barium		mg/L		0.01		E200.7	06/21/17 04:07 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/27/17 18:05 / jpv
Boron	1.31	mg/L		0.05		E200.7	06/21/17 04:07 / rlh
Cadmium		mg/L		0.005		E200.8	06/23/17 02:13 / jpv
Chromium		mg/L		0.01		E200.8	06/23/17 02:13 / jpv
Cobalt		mg/L		0.02		E200.8	06/23/17 02:13 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:05 / jpv
Lithium	0.95	mg/L	D	0.04		E200.7	06/21/17 04:07 / rlh
Mercury		mg/L		0.001		E245.1	06/21/17 12:35 / jh
Molybdenum		mg/L		0.05		E200.8	06/23/17 02:13 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:13 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:05 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.1	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.30	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	2.0	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 226 + Radium 228	3.2	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDO M:

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-010 **Client Sample ID:** EQBK-BJG-061417

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 12:55
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/21/17 04:10 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:10 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:10 / rlh
Sodium		mg/L		1		E200.7	06/21/17 04:10 / rlh
PHYSICAL PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	06/16/17 17:50 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/17/17 08:02 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	06/23/17 01:00 / mej
Sulfate	ND	mg/L		1		E300.0	06/23/17 01:00 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	06/21/17 16:26 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:27 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:27 / jpv
Barium	ND	mg/L		0.01		E200.7	06/21/17 04:10 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/27/17 18:08 / jpv
Boron	ND	mg/L		0.05		E200.7	06/21/17 04:10 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/21/17 04:10 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/21/17 04:10 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/21/17 04:10 / rlh
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:08 / jpv
Lithium	ND	mg/L		0.01		E200.7	06/21/17 04:10 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:41 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/21/17 04:10 / rlh
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:27 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:08 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.08	pCi/L	U			E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.24	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	0.28	pCi/L	U			RA-05	06/29/17 15:19 / eli-ca
Radium 228 precision (±)	0.99	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 226 + Radium 228	0.4	pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-011 **Client Sample ID:** EQBK/SCM/061417

Revised Date: 12/21/17 Report Date: 07/06/17 Collection Date: 06/14/17 12:55

DateReceived: 06/16/17 **Matrix:** Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	06/21/17 04:14 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:14 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:14 / rlh
Sodium		mg/L		1		E200.7	06/21/17 04:14 / rlh
PHYSICAL PROPERTIES		·					
pH	5.8	s.u.	Н	0.1		A4500-H B	06/16/17 17:53 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	••	10		A2540 C	06/17/17 08:02 / rik
INORGANICS							
Chloride		mg/L		1		E300.0	06/23/17 01:19 / mej
Sulfate	ND	U		1		E300.0	06/23/17 01:19 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	06/21/17 16:48 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:31 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:31 / jpv
Barium	ND	mg/L		0.01		E200.7	06/21/17 04:14 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/27/17 18:10 / jpv
Boron	ND	mg/L		0.05		E200.7	06/21/17 04:14 / rlh
Cadmium	ND	mg/L		0.005		E200.7	06/21/17 04:14 / rlh
Chromium	ND	mg/L		0.01		E200.7	06/21/17 04:14 / rlh
Cobalt	ND	mg/L		0.02		E200.7	06/21/17 04:14 / rlh
Lead		mg/L		0.01		E200.8	06/27/17 18:10 / jpv
Lithium		mg/L		0.01		E200.7	06/21/17 04:14 / rlh
Mercury	ND	J		0.001		E245.1	06/21/17 12:43 / jh
Molybdenum		mg/L		0.05		E200.7	06/21/17 04:14 / rlh
Selenium		mg/L		0.01		E200.8	06/23/17 02:31 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:10 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	0.59	pCi/L	U			RA-05	06/29/17 15:19 / eli-ca
Radium 228 precision (±)	0.94	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061657-013

Client Sample ID: MNW-15

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/14/17 14:20

DateReceived: 06/16/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	256	mg/L		1		E200.7	06/21/17 04:28 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:28 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:28 / rlh
Sodium		mg/L	D	2		E200.7	06/21/17 04:28 / rlh
	420	mg/L	5	_		2200.7	00/21/17 04.20 / 1111
PHYSICAL PROPERTIES				0.4		A 4500 LLD	00/40/47 47 50 / :
pH		s.u.	Н	0.1		A4500-H B	06/16/17 17:58 / pjw
Solids, Total Dissolved TDS @ 180 C	2620	mg/L	D	40		A2540 C	06/17/17 08:02 / rik
INORGANICS							
Chloride	688	mg/L	D	3		E300.0	06/23/17 03:16 / mej
Sulfate		mg/L	D	9		E300.0	06/23/17 03:16 / mej
Fluoride	0.5	mg/L		0.1		A4500-F C	06/21/17 17:03 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:38 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:38 / jpv
Barium	0.03	mg/L		0.01		E200.7	06/21/17 04:28 / rlh
Beryllium	0.072	mg/L		0.001		E200.7	06/21/17 04:28 / rlh
Boron	8.62	mg/L		0.05		E200.7	06/21/17 04:28 / rlh
Cadmium	0.116	mg/L		0.005		E200.7	06/21/17 04:28 / rlh
Chromium		mg/L		0.01		E200.8	06/23/17 02:38 / jpv
Cobalt	0.26	mg/L		0.02		E200.8	06/23/17 02:38 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:15 / jpv
Lithium	0.11	mg/L	D	0.02		E200.7	06/21/17 04:28 / rlh
Mercury	0.012	mg/L		0.001		E245.1	06/27/17 10:41 / jh
Molybdenum	ND	mg/L		0.05		E200.7	06/21/17 04:28 / rlh
Selenium		mg/L		0.01		E200.8	06/23/17 02:38 / jpv
Thallium	0.002	mg/L		0.002		E200.8	06/27/17 18:15 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.33	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	0.91	pCi/L	U			RA-05	06/29/17 15:19 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 226 + Radium 228		pCi/L	U			A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17061657-015 Client Sample ID: SFL MW-7

Revised Date: 12/21/17 **Report Date:** 07/06/17 Collection Date: 06/14/17 15:30 DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	662	mg/L		1		E200.7	06/21/17 04:35 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:35 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:35 / rlh
Sodium		mg/L	D	4		E200.7	06/21/17 04:35 / rlh
PHYSICAL PROPERTIES							
pH	6.8	s.u.	Н	0.1		A4500-H B	06/16/17 18:14 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	06/17/17 08:03 / rik
		3					
INORGANICS		_	_				
Chloride		mg/L	D	6		E300.0	06/23/17 03:55 / mej
Sulfate		mg/L	D	20		E300.0	06/23/17 03:55 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	06/21/17 17:09 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:45 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:45 / jpv
Barium	0.03	mg/L		0.01		E200.7	06/21/17 04:35 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/27/17 18:20 / jpv
Boron	0.76	mg/L		0.05		E200.7	06/21/17 04:35 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/23/17 02:45 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/23/17 02:45 / jpv
Cobalt		mg/L		0.02		E200.8	06/23/17 02:45 / jpv
Lead		mg/L		0.01		E200.8	06/27/17 18:20 / jpv
Lithium		mg/L	D	0.04		E200.7	06/21/17 04:35 / rlh
Mercury		mg/L		0.001		E245.1	06/21/17 12:51 / jh
Molybdenum		mg/L		0.05		E200.8	06/23/17 02:45 / jpv
Selenium		mg/L		0.01		E200.8	06/23/17 02:45 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:20 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.87	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.22	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	06/29/17 15:19 / eli-ca
Radium 228 precision (±)	0.94	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	06/29/17 15:19 / eli-ca
Radium 226 + Radium 228	2.3	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-017 **Client Sample ID:** SFL MW-3

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 16:50
DateReceived: 06/16/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	672	mg/L		1		E200.7	06/21/17 04:42 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:42 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:42 / rlh
Sodium	911	mg/L	D	4		E200.7	06/21/17 04:42 / rlh
PHYSICAL PROPERTIES							
pH	3.9	s.u.	Н	0.1		A4500-H B	06/16/17 18:19 / pjw
Solids, Total Dissolved TDS @ 180 C	4710	mg/L	D	90		A2540 C	06/17/17 08:03 / rik
INORGANICS							
Chloride	1440	mg/L	D	6		E300.0	06/23/17 04:34 / mej
Sulfate	2380	mg/L	D	20		E300.0	06/23/17 04:34 / mej
Fluoride	0.6	mg/L		0.1		A4500-F C	06/21/17 17:22 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:53 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 02:53 / jpv
Barium	0.03	mg/L		0.01		E200.7	06/21/17 04:42 / rlh
Beryllium	0.037	mg/L		0.001		E200.8	06/27/17 18:33 / jpv
Boron	2.93	mg/L		0.05		E200.7	06/21/17 04:42 / rlh
Cadmium	0.007	mg/L		0.005		E200.8	06/23/17 02:53 / jpv
Chromium	ND	mg/L		0.01		E200.8	06/23/17 02:53 / jpv
Cobalt	0.07	mg/L		0.02		E200.8	06/23/17 02:53 / jpv
Lead	0.03	mg/L		0.01		E200.8	06/27/17 18:33 / jpv
Lithium	0.40	mg/L	D	0.04		E200.7	06/21/17 04:42 / rlh
Mercury	0.001	mg/L		0.001		E245.1	06/23/17 12:18 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 02:53 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:53 / jpv
Thallium	0.006	mg/L		0.002		E200.8	06/27/17 18:33 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.9	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 precision (±)	0.44	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	07/04/17 09:41 / eli-ca
Radium 228	3.1	pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 228 MDC	1.3	pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 226 + Radium 228	5.0	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

ADO MILI

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-018 Client Sample ID: SFL MW-4

Revised Date: 12/21/17
Report Date: 07/06/17
Collection Date: 06/14/17 17:45
DateReceived: 06/16/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS	700			4		F000 7	00/04/47 04 40 /
Calcium		mg/L		1		E200.7	06/21/17 04:46 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:46 / rlh
Potassium		mg/L	Б	1		E200.7	06/21/17 04:46 / rlh
Sodium	1040	mg/L	D	4		E200.7	06/21/17 04:46 / rlh
PHYSICAL PROPERTIES							
Н	6.6	s.u.	Н	0.1		A4500-H B	06/16/17 18:22 / pjw
Solids, Total Dissolved TDS @ 180 C	5700	mg/L	D	100		A2540 C	06/17/17 08:03 / rik
NORGANICS							
Chloride	1740	mg/L	D	6		E300.0	06/23/17 04:54 / mej
Sulfate		mg/L	D	20		E300.0	06/23/17 04:54 / mej
Fluoride	ND	mg/L		0.1		A4500-F C	06/21/17 17:25 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 02:56 / jpv
Arsenic		mg/L		0.01		E200.8	06/23/17 02:56 / jpv
Barium		mg/L		0.01		E200.7	06/21/17 04:46 / rlh
Beryllium		mg/L		0.001		E200.8	06/27/17 18:36 / jpv
Boron		mg/L		0.05		E200.7	06/21/17 04:46 / rlh
Cadmium		mg/L		0.005		E200.8	06/23/17 02:56 / jpv
Chromium		mg/L		0.01		E200.8	06/23/17 02:56 / jpv
Cobalt		mg/L		0.02		E200.8	06/23/17 02:56 / jpv
ead	ND	mg/L		0.01		E200.8	06/27/17 18:36 / jpv
ithium	0.48	mg/L	D	0.04		E200.7	06/21/17 04:46 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:56 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 02:56 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 02:56 / jpv
⁻ hallium	ND	mg/L		0.002		E200.8	06/27/17 18:36 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	1.1	pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 226 MDC		pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 228		pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 228 precision (±)		pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	06/29/17 15:47 / eli-ca
Radium 226 + Radium 228	2.6	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC		pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military control minu.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17061657-019

Client Sample ID: DUP-3

 Revised Date:
 12/21/17

 Report Date:
 07/06/17

 Collection Date:
 06/14/17

 DateReceived:
 06/16/17

				ъ.	MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	671	mg/L		1		E200.7	06/21/17 04:49 / rlh
Magnesium		mg/L		1		E200.7	06/21/17 04:49 / rlh
Potassium		mg/L		1		E200.7	06/21/17 04:49 / rlh
Sodium		mg/L	D	4		E200.7	06/21/17 04:49 / rlh
PHYSICAL PROPERTIES							
pH	6.8	s.u.	Н	0.1		A4500-H B	06/16/17 18:24 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	100		A2540 C	06/17/17 08:04 / rik
INORGANICS		-					
Chloride	2820	mg/L	D	6		E300.0	06/23/17 05:13 / mej
Sulfate		mg/L	D	20		E300.0	06/23/17 05:13 / mej
Fluoride		mg/L	D	0.1		A4500-F C	06/21/17 17:28 / cjm
ridonde	ND	IIIg/L		0.1		A4300-F C	00/21/17 17.20 / CJIII
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	06/23/17 03:00 / jpv
Arsenic	ND	mg/L		0.01		E200.8	06/23/17 03:00 / jpv
Barium	0.03	mg/L		0.01		E200.7	06/21/17 04:49 / rlh
Beryllium	ND	mg/L		0.001		E200.8	06/27/17 18:39 / jpv
Boron	0.76	mg/L		0.05		E200.7	06/21/17 04:49 / rlh
Cadmium	ND	mg/L		0.005		E200.8	06/23/17 03:00 / jpv
Chromium		mg/L		0.01		E200.8	06/23/17 03:00 / jpv
Cobalt	ND	mg/L		0.02		E200.8	06/23/17 03:00 / jpv
Lead	ND	mg/L		0.01		E200.8	06/27/17 18:39 / jpv
Lithium		mg/L	D	0.04		E200.7	06/21/17 04:49 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/21/17 12:58 / jh
Molybdenum	ND	mg/L		0.05		E200.8	06/23/17 03:00 / jpv
Selenium	ND	mg/L		0.01		E200.8	06/23/17 03:00 / jpv
Thallium	ND	mg/L		0.002		E200.8	06/27/17 18:39 / jpv
RADIONUCLIDES - TOTAL							
Radium 226	0.76	pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 226 precision (±)	0.22	pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	07/04/17 12:02 / eli-ca
Radium 228	1.9	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 precision (±)	0.82	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	06/29/17 14:12 / eli-ca
Radium 226 + Radium 228	2.7	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	07/05/17 09:40 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC Military solution military

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:07/05/17Project:CCRRWork Order:B17061657

Analyte	Result	Units	RL %REC	Low Limit	High Limit	RPD	RPDLimit Qual
Method: E903.0							Batch: RA226-8539
Lab ID: LCS-RA226-8539	Laboratory Con	trol Sample		Run: G500	0W_170622A		07/04/17 09:41
Radium 226	9.0	pCi/L	88	80	120		
Lab ID: MB-RA226-8539	Method Blank			Run: G500	0W_170622A		07/04/17 09:41
Radium 226	0.1	pCi/L					U
Radium 226 precision (±)	0.1	pCi/L					
Radium 226 MDC	0.2	pCi/L					
Lab ID: B17061657-007CMS	Sample Matrix	Spike		Run: G500	0W_170622A		07/04/17 09:41
Radium 226	18	pCi/L	85	70	130		
Lab ID: B17061657-007CMSD	Sample Matrix	Spike Duplicate		Run: G500	0W_170622A		07/04/17 09:41
Radium 226	18	pCi/L	85	70	130	1.4	20
Method: E903.0							Batch: RA226-8538
Lab ID: LCS-RA226-8538	Laboratory Con	trol Sample		Run: G542	M_170622A		07/04/17 09:35
Radium 226	11	pCi/L	107	80	120		
Lab ID: MB-RA226-8538	Method Blank			Run: G542	M_170622A		07/04/17 09:35
Radium 226	0.2	pCi/L					U
Radium 226 precision (±)	0.1	pCi/L					
Radium 226 MDC	0.2	pCi/L					
Lab ID: C17060553-002CMS	Sample Matrix	Spike		Run: G542	M_170622A		07/04/17 09:35
Radium 226	17	pCi/L	77	70	130		
Lab ID: C17060553-002CMSD	Sample Matrix	Spike Duplicate		Run: G542	M_170622A		07/04/17 09:35
Radium 226	18	pCi/L	83	70	130	7.0	20

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date: 07/05/17Project:CCRRWork Order: B17061657

Analyte	Result	Units	RL %	REC	Low Limit	High Lim	nit	RPD	RPDLimit	Qual
Method: RA-05									Batch: RA	228-5525
Lab ID: LCS-228-RA226-8538	Laboratory Contr	ol Sample			Run: TENN	IELEC-3_	170622B		06/29	9/17 11:52
Radium 228	8.6 p	oCi/L		86	80	12	20			
Lab ID: MB-RA226-8538	Method Blank				Run: TENN	IELEC-3	170622B		06/29	9/17 11:52
Radium 228	0.6 p	oCi/L				_				U
Radium 228 precision (±)	0.9 p	oCi/L								
Radium 228 MDC	1 p	oCi/L								
Lab ID: C17060553-010CMS	Sample Matrix S	pike			Run: TENN	IELEC-3_	170622B		06/29	9/17 11:52
Radium 228	26 p	oCi/L		123	70	13	80			
Lab ID: C17060553-010CMSD	Sample Matrix S	pike Duplicate			Run: TENN	IELEC-3_	170622B		06/29	9/17 11:52
Radium 228	24 p	oCi/L		111	70	13	30	9.0	20	
Method: RA-05									Batch: RA	228-5526
Lab ID: LCS-228-RA226-8539	Laboratory Contr	rol Sample			Run: TENN	IELEC-3_	170622C		06/29	9/17 14:12
Radium 228	9.3 p	oCi/L		96	80	12	20			
Lab ID: MB-RA226-8539	Method Blank				Run: TENN	IELEC-3_	170622C		06/29	9/17 14:12
Radium 228	0.4 p	oCi/L								U
Radium 228 precision (±)	0.8 p	oCi/L								
Radium 228 MDC	1 p	oCi/L								
Lab ID: B17061657-019CMS	Sample Matrix S	pike			Run: TENN	IELEC-3_	170622C		06/29	9/17 14:12
Radium 228	20 p	oCi/L		97	70	13	30			
Lab ID: B17061657-019CMSD	Sample Matrix S	pike Duplicate			Run: TENN	IELEC-3_	170622C		06/29	9/17 14:12
Radium 228	18 p	oCi/L		88	70	13	80	10	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/05/17Project:CCRRWork Order: B17061657

Analyte	Co	ount Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A	A2540 C								Batcl	n: 110643
Lab ID: L	CS-110643	Laboratory Co	ntrol Sample			Run: BAL #SD-15_170616D			06/16/	17 13:52
Solids, Total I	Dissolved TDS @ 180 C	1010	mg/L	10	100	90	110			
Lab ID: B	17061657-005A DUP	Sample Duplic	cate			Run: BAL #	SD-15_170616D		06/16/	17 13:55
Solids, Total I	Dissolved TDS @ 180 C	6420	mg/L	94				0.2	5	
Lab ID: M	IB-110643	Method Blank				Run: BAL #	SD-15_170616D		06/19/	17 09:39
Solids, Total I	Dissolved TDS @ 180 C	ND	mg/L	4						
Method: A	A2540 C								Batcl	n: 110647
Lab ID: M	IB-110647	Method Blank				Run: BAL #	SD-15_170617B		06/17/	17 07:55
Solids, Total I	Dissolved TDS @ 180 C	ND ND	mg/L	4						
Lab ID: L	CS-110647	Laboratory Co	ntrol Sample			Run: BAL #	SD-15_170617B		06/17/	17 07:55
Solids, Total I	Dissolved TDS @ 180 C	962	mg/L	10	97	90	110			
Lab ID: B	17061694-001A DUP	Sample Duplic	cate			Run: BAL #	SD-15_170617B		06/17/	17 07:56
Solids, Total I	Dissolved TDS @ 180 C	7590	mg/L	93				0.7	5	
Method: A	A2540 C								Batcl	n: 110648
Lab ID: M	IB-110648	Method Blank				Run: BAL #	SD-15_170617C		06/17/	17 08:01
Solids, Total I	Dissolved TDS @ 180 C	ND ND	mg/L	4						
Lab ID: L	CS-110648	Laboratory Co	ntrol Sample			Run: BAL #	SD-15_170617C		06/17/	17 08:01
Solids, Total I	Dissolved TDS @ 180 C	957	mg/L	10	96	90	110			
Lab ID: B	17061657-010A DUP	Sample Duplic	cate			Run: BAL #	SD-15_170617C		06/17/	17 08:02
Solids, Total I	Dissolved TDS @ 180 C	, ND	mg/L	10					5	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/05/17Project:CCRRWork Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170621A
Lab ID:	ICV	Initia	l Calibratio	on Verification S	tandard					06/21/	17 15:18
Fluoride			0.900	mg/L	0.10	90	90	110			
Method:	A4500-F C									Batch:	R281950
Lab ID:	MBLK	Meth	od Blank				Run: MAN-	ΓΕCH_170621A		06/21/	17 15:12
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Labo	ratory For	tified Blank			Run: MAN-	ΓΕCH_170621A		06/21/	17 15:15
Fluoride			0.920	mg/L	0.10	92	90	110			
Lab ID:	B17061657-001AMS	Sam	ple Matrix	Spike			Run: MAN-	ΓΕCH_170621A		06/21/	17 15:23
Fluoride			1.57	mg/L	0.10	93	80	120			
Lab ID:	B17061657-001AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	ΓΕCH_170621A		06/21/	17 15:25
Fluoride			1.62	mg/L	0.10	98	80	120	3.1	10	
Lab ID:	B17061657-011AMS	Sam	ple Matrix	Spike			Run: MAN-	ΓΕCH_170621A		06/21/	17 16:50
Fluoride			0.910	mg/L	0.10	91	80	120			
Lab ID:	B17061657-011AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	ΓΕCH_170621A		06/21/	17 16:53
Fluoride			0.920	mg/L	0.10	92	80	120	1.1	10	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/05/17Project:CCRRWork Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: PH	SC _101-B_	_170616A
Lab ID:	pH 8	Initi	al Calibratio	n Verificatio	on Standard					06/16/	17 08:45
рН			7.99	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cali	bration Ver	ification Standar	d				06/16/	17 13:30
рН			7.00	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cali	bration Ver	ification Standar	d				06/16/	17 16:13
рН			7.01	s.u.	0.10	100	98	102			
Lab ID:	CCV - pH 7	Cor	ntinuing Cali	bration Ver	ification Standar	d				06/16/	17 18:01
рН			7.01	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R281591
Lab ID:	B17061657-005ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17061	6A	06/16/	17 14:42
рН			4.50	s.u.	0.10				3.1	3	R
Lab ID:	B17061657-014ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17061	6A	06/16/	17 18:11
рН			7.01	s.u.	0.10				0.3	3	
Method:	A4500-H B							Analytica	al Run: PH	SC _101-B_	_170617A
Lab ID:	pH 8	Initi	al Calibratio	n Verification	on Standard					06/17/	17 13:16
рН			7.99	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R281659
Lab ID:	B17061657-005ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17061	7A	06/17/	17 14:31
pН			4.53	s.u.	0.10				0.2	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/05/17Project:CCRRWork Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC N	METROHM 2	_170622A
Lab ID:	ICV	2 Initia	al Calibratio	on Verification Sta	andard					06/22	/17 15:54
Chloride			2.21	mg/L	1.0	98	90	110			
Sulfate			8.97	mg/L	1.0	100	90	110			
Method:	E300.0									Batch:	R281994
Lab ID:	ICB	2 Met	hod Blank				Run: IC ME	TROHM 2_17	0622A	06/22	/17 16:13
Chloride			ND	mg/L	0.002						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 2_17	0622A	06/22	/17 16:33
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			30.7	mg/L	1.0	102	90	110			
Lab ID:	B17061657-002AMS	2 Sam	nple Matrix	Spike			Run: IC ME	TROHM 2_17	0622A	06/22	/17 22:04
Chloride			457	mg/L	1.2	104	90	110			
Sulfate			1140	mg/L	3.7	106	90	110			
Lab ID:	B17061657-002AMSE	O 2 Sam	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0622A	06/22	/17 22:23
Chloride			455	mg/L	1.2	103	90	110	0.4	20	
Sulfate			1140	mg/L	3.7	106	90	110	0.4	20	
Lab ID:	B17061657-012AMS	2 Sam	nple Matrix	Spike			Run: IC ME	TROHM 2_17	0622A	06/23	/17 02:37
Chloride			3380	mg/L	6.1	96	90	110			Е
Sulfate			4400	mg/L	18	108	90	110			
Lab ID:	B17061657-012AMSE	2 Sam	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0622A	06/23	/17 02:57
Chloride			3410	mg/L	6.1	99	90	110	0.8	20	Е
Sulfate			4440	mg/L	18	109	90	110	8.0	20	
Lab ID:	B17061661-002AMS	2 Sam	nple Matrix	Spike			Run: IC ME	TROHM 2_17	0622A	06/23	/17 07:10
Chloride			1200	mg/L	6.1	110	90	110			
Sulfate			7400	mg/L	18	105	90	110			
Lab ID:	B17061661-002AMSE	2 Sam	nple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0622A	06/23	/17 07:30
Chloride			1190	mg/L	6.1	109	90	110	1.2	20	
Sulfate			7340	mg/L	18	103	90	110	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

E - Estimated value. Result exceeds the instrument upper quantitation limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Revised Date: 12/21/17

Report Date: 07/06/17 Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Ru	n: ICP203-B	_170620 <i>A</i>
Lab ID:	ICV	12 Co	ntinuing Cali	bration Veri	fication Standa	rd				06/20	/17 11:43
Barium			2.42	mg/L	0.10	97	95	105			
Beryllium			1.26	mg/L	0.010	101	95	105			
Boron			2.53	mg/L	0.10	101	95	105			
Cadmium			2.58	mg/L	0.010	103	95	105			
Calcium			25.4	mg/L	1.0	102	95	105			
Chromium			2.46	mg/L	0.050	99	95	105			
Cobalt			2.57	mg/L	0.020	103	95	105			
Lithium			1.27	mg/L	0.10	101	95	105			
Magnesiun	n		25.1	mg/L	1.0	100	95	105			
Molybdenu			2.59	mg/L	0.10	104	95	105			
Potassium			25.3	mg/L	1.0	101	95	105			
Sodium			25.3	mg/L	1.0	101	95	105			
Method:	E200.7									Bato	h: 110656
Lab ID:	MB-110656	12 Me	thod Blank				Run: ICP20	3-B 170620A			/17 03:10
Barium		1110	ND	mg/L	0.0005		11011.101 20	.o b_11002011		00/21	717 00.10
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.003						
Calcium			ND	•	0.0010						
Chromium			ND ND	mg/L	0.002						
			ND ND	mg/L							
Cobalt				mg/L	0.005						
Lithium			0.006	mg/L	0.004						
Magnesiun			ND	mg/L	0.01						
Molybdenu			ND	mg/L	0.007						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-110656	12 Lab	oratory Con	itrol Sample			Run: ICP20	3-B_170620A		06/21	/17 03:14
Barium			0.511	mg/L	0.10	102	85	115			
Beryllium			0.267	mg/L	0.010	107	85	115			
Boron			0.488	mg/L	0.10	98	85	115			
Cadmium			0.254	mg/L	0.010	102	85	115			
Calcium			25.7	mg/L	1.0	103	85	115			
Chromium			0.507	mg/L	0.050	101	85	115			
Cobalt			0.501	mg/L	0.050	100	85	115			
Lithium			0.515	mg/L	0.10	102	85	115			
Magnesiun	n		26.0	mg/L	1.0	104	85	115			
Molybdenu			0.506	mg/L	0.10	101	85	115			
Potassium			25.6	mg/L	1.0	102	85	115			
Sodium			25.4	mg/L	1.0	101	85	115			
Lab ID:	B17061657-001BMS3	3 12 Sai	mple Matrix	Spike			Run: ICP20	3-B_170620A		06/21	/17 03:28
Barium			0.517	mg/L	0.050	101	70	130		33.21	
Beryllium			0.270	mg/L	0.0010	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: CCRR Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batc	h: 110656
Lab ID:	B17061657-001BMS3	12 Sa	mple Matrix	Spike			Run: ICP20	3-B_170620A		06/21/	/17 03:28
Boron			5.35	mg/L	0.050		70	130			Α
Cadmium			0.250	mg/L	0.0020	100	70	130			
Calcium			101	mg/L	1.0	122	70	130			
Chromium			0.499	mg/L	0.0050	99	70	130			
Cobalt			0.510	mg/L	0.010	100	70	130			
Lithium			0.536	mg/L	0.10	99	70	130			
Magnesium	า		39.5	mg/L	1.0	108	70	130			
Molybdenu	m		0.517	mg/L	0.014	99	70	130			
Potassium			36.0	mg/L	1.0	101	70	130			
Sodium			337	mg/L	1.0		70	130			Α
Lab ID:	B17061657-001BMSI	12 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170620A		06/21/	/17 03:32
Barium			0.497	mg/L	0.050	97	70	130	4.0	20	
Beryllium			0.252	mg/L	0.0010	101	70	130	6.8	20	
Boron			5.10	mg/L	0.050		70	130	4.9	20	Α
Cadmium			0.241	mg/L	0.0020	97	70	130	3.7	20	
Calcium			94.9	mg/L	1.0	96	70	130	6.7	20	
Chromium			0.486	mg/L	0.0050	96	70	130	2.7	20	
Cobalt			0.493	mg/L	0.010	96	70	130	3.5	20	
Lithium			0.518	mg/L	0.10	95	70	130	3.5	20	
Magnesium	ı		36.7	mg/L	1.0	97	70	130	7.3	20	
Molybdenu	m		0.501	mg/L	0.014	95	70	130	3.1	20	
Potassium			34.8	mg/L	1.0	97	70	130	3.3	20	
Sodium			322	mg/L	1.0		70	130	4.6	20	Α
Lab ID:	B17061699-001BMS3	12 Sa	mple Matrix	Spike			Run: ICP20	3-B_170620A		06/21/	/17 05:10
Barium			0.584	mg/L	0.050	98	70	130			
Beryllium			0.260	mg/L	0.0010	104	70	130			
Boron			0.809	mg/L	0.050	101	70	130			
Cadmium			0.248	mg/L	0.0020	99	70	130			
Calcium			71.5	mg/L	1.0	104	70	130			
Chromium			0.497	mg/L	0.0050	98	70	130			
Cobalt			0.482	mg/L	0.010	96	70	130			
Lithium			0.539	mg/L	0.10	97	70	130			
Magnesium			46.8	mg/L	1.0	104	70	130			
Molybdenu	m		8.62	mg/L	0.014		70	130			Α
Potassium			56.4	mg/L	1.0	101	70	130			
Sodium			183	mg/L	1.0		70	130			Α
Lab ID:	B17061699-001BMS	12 Sa	mple Matrix				Run: ICP20	3-B_170620A		06/21/	/17 05:14
Barium			0.577	mg/L	0.050	97	70	130	1.2	20	
Beryllium			0.260	mg/L	0.0010	104	70	130	0.2	20	
Boron			0.796	mg/L	0.050	99	70	130	1.6	20	
Cadmium			0.253	mg/L	0.0020	101	70	130	2.2	20	
Calcium			72.5	mg/L	1.0	108	70	130	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.



Prepared by Billings, MT Branch

Revised Date: 12/21/17

Client: Texas Municipal Power Agency

Report Date: 07/06/17

Project: CCRR Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batch	n: 110656
Lab ID:	B17061699-001BMS	1 2 Samp	ole Matrix	Spike Duplicate			Run: ICP20	3-B_170620A		06/21/	17 05:14
Chromium			0.509	mg/L	0.0050	101	70	130	2.3	20	
Cobalt			0.494	mg/L	0.010	99	70	130	2.3	20	
Lithium			0.533	mg/L	0.10	96	70	130	1.1	20	
Magnesiun	n		47.1	mg/L	1.0	105	70	130	0.5	20	
Molybdenu	ım		8.96	mg/L	0.014		70	130	3.8	20	Α
Potassium			55.8	mg/L	1.0	98	70	130	1.0	20	
Sodium			182	mg/L	1.0		70	130	8.0	20	Α

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Revised Date: 12/21/17 **Report Date:** 07/06/17

Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS202-B	_170627A
Lab ID:	QCS	3 Init	ial Calibratio	n Verificat	ion Standard					06/27	/17 13:19
Beryllium			0.0262	mg/L	0.0010	105	90	110			
Lead			0.0481	mg/L	0.010	96	90	110			
Thallium			0.0469	mg/L	0.10	94	90	110			
Method:	E200.8									Batc	h: 110656
Lab ID:	MB-110656	3 Me	thod Blank				Run: ICPM	S202-B_170627A		06/27/	/17 17:08
Beryllium			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00005						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-110656	3 Lal	boratory Cor	trol Samp	e		Run: ICPM	S202-B_170627A		06/27	/17 17:27
Beryllium			0.254	mg/L	0.0010	102	85	115			
Lead			0.520	mg/L	0.0010	104	85	115			
Thallium			0.496	mg/L	0.00050	99	85	115			
Lab ID:	B17061657-001BMS	3 3 Sa	mple Matrix	Spike			Run: ICPM	S202-B_170627A		06/27	/17 17:29
Beryllium			0.221	mg/L	0.0010	88	70	130			
Lead			0.547	mg/L	0.0010	109	70	130			
Thallium			0.497	mg/L	0.00050	99	70	130			
Lab ID:	B17061657-001BMS	D 3 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S202-B_170627A		06/27	/17 17:32
Beryllium			0.221	mg/L	0.0010	88	70	130	0.3	20	
Lead			0.552	mg/L	0.0010	110	70	130	1.0	20	
Thallium			0.503	mg/L	0.00050	101	70	130	1.3	20	
Lab ID:	B17061699-001BMS	3 3 Sa	mple Matrix	Spike			Run: ICPM	S202-B_170627A		06/27	/17 18:44
Beryllium			0.258	mg/L	0.0010	103	70	130			
Lead			0.505	mg/L	0.0010	101	70	130			
Thallium			0.494	mg/L	0.00071	99	70	130			
Lab ID:	B17061699-001BMS	D 3 Sa	mple Matrix	Spike Dup	licate		Run: ICPM	S202-B_170627A		06/27	/17 18:46
Beryllium			0.251	mg/L	0.0010	101	70	130	2.5	20	
Lead			0.505	mg/L	0.0010	101	70	130	0.1	20	
Thallium			0.497	mg/L	0.00071	99	70	130	0.6	20	

Revised Date: 12/21/17

Report Date: 07/06/17

Project: CCRR

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.8							Analytica	I Run: ICPMS206-B	3_170621A
Lab ID:	QCS	8 Init	al Calibration	on Verification	on Standard				06/22	2/17 16:13
Antimony			0.0470	mg/L	0.050	94	90	110		
Arsenic			0.0483	mg/L	0.0050	97	90	110		
Cadmium			0.0254	mg/L	0.0010	102	90	110		
Chromium			0.0492	mg/L	0.010	98	90	110		
Cobalt			0.0499	mg/L	0.010	100	90	110		
Lead			0.0478	mg/L	0.010	96	90	110		
Molybdenu	m		0.0449	mg/L	0.0050	90	90	110		
Selenium			0.0493	mg/L	0.0050	99	90	110		
Method:	E200.8								Bato	ch: 110656
Lab ID:	MB-110656	8 Me	thod Blank				Run: ICPM	S206-B_170621	A 06/23	3/17 01:11
Antimony			ND	mg/L	0.00004					
Arsenic			ND	mg/L	0.0002					
Cadmium			ND	mg/L	0.00003					
Chromium			ND	mg/L	0.0001					
Cobalt			ND	mg/L	0.00002					
Lead			ND	mg/L	0.00003					
Molybdenu	m		ND	mg/L	0.00003					
Selenium			ND	mg/L	0.0004					
Lab ID:	LCS-110656	8 Lab	oratory Co	ntrol Sample)		Run: ICPM	S206-B_170621 <i>/</i>	A 06/23	3/17 01:18
Antimony			0.477	mg/L	0.0010	95	85	115		
Arsenic			0.461	mg/L	0.0010	92	85	115		
Cadmium			0.230	mg/L	0.0010	92	85	115		
Chromium			0.457	mg/L	0.0050	91	85	115		
Cobalt			0.545	mg/L	0.0050	109	85	115		
Lead			0.473	mg/L	0.0010	95	85	115		
Molybdenu	m		0.454	mg/L	0.0010	91	85	115		
Selenium			0.457	mg/L	0.0010	91	85	115		
Lab ID:	B17061657-001BMS3	8 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170621/	A 06/23	3/17 01:22
Antimony			0.450	mg/L	0.0010	90	70	130		
Arsenic			0.460	mg/L	0.0010	90	70	130		
Cadmium			0.223	mg/L	0.0010	89	70	130		
Chromium			0.451	mg/L	0.0050	90	70	130		
Cobalt			0.550	mg/L	0.0050	108	70	130		
Lead			0.446	mg/L	0.0010	89	70	130		
Molybdenu	m		0.464	mg/L	0.0010	90	70	130		
Selenium			0.458	mg/L	0.0010	91	70	130		
Lab ID:	B17061657-001BMSE	8 Sar	mple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_170621/	A 06/23	3/17 01:25
Antimony			0.462	mg/L	0.0010	92	70	_ 130	2.6 20	
Arsenic			0.456	mg/L	0.0010	89	70	130	0.8 20	
Cadmium			0.220	mg/L	0.0010	88	70	130	1.2 20	
			0.451	mg/L	0.0050	90	70	130	0.0 20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: CCRR Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 110656
Lab ID:	B17061657-001BMSI	D 8 Sa	mple Matrix	Spike Duplicate			Run: ICPM	S206-B_170621A	١	06/23/	17 01:25
Cobalt			0.548	mg/L	0.0050	107	70	130	0.4	20	
Lead			0.463	mg/L	0.0010	92	70	130	3.7	20	
Molybdenu	m		0.472	mg/L	0.0010	91	70	130	1.7	20	
Selenium			0.458	mg/L	0.0010	91	70	130	0.0	20	
Lab ID:	B17061699-001BMS3	3 8 Sa	mple Matrix	Spike			Run: ICPM	S206-B_170621A	١	06/23/	17 03:18
Antimony			0.468	mg/L	0.0010	94	70	130			
Arsenic			0.460	mg/L	0.0010	90	70	130			
Cadmium			0.225	mg/L	0.0010	89	70	130			
Chromium			0.465	mg/L	0.0050	92	70	130			
Cobalt			0.570	mg/L	0.0050	114	70	130			
Lead			0.467	mg/L	0.0010	93	70	130			
Molybdenu	m		9.88	mg/L	0.0010		70	130			Α
Selenium			0.469	mg/L	0.0010	92	70	130			
Lab ID:	B17061699-001BMSI	D 8 Sa	mple Matrix	Spike Duplicate			Run: ICPM	S206-B_170621A	١	06/23/	17 03:22
Antimony			0.460	mg/L	0.0010	92	70	130	1.8	20	
Arsenic			0.456	mg/L	0.0010	89	70	130	0.9	20	
Cadmium			0.226	mg/L	0.0010	89	70	130	0.5	20	
Chromium			0.470	mg/L	0.0050	93	70	130	1.1	20	
Cobalt			0.551	mg/L	0.0050	110	70	130	3.5	20	
Lead			0.451	mg/L	0.0010	90	70	130	3.4	20	
Molybdenu	m		9.69	mg/L	0.0010		70	130	1.9	20	Α
Selenium			0.466	mg/L	0.0010	91	70	130	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency **Report Date:** 07/06/17

Revised Date: 12/21/17

Project: CCRR Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B	_170621A
Lab ID:	ICV	Initia	ıl Calibrati	on Verificat	ion Standard					06/21	/17 09:52
Mercury			0.00200	mg/L	0.00010	100	90	110			
Method:	E245.1									Batc	h: 110731
Lab ID:	MB-110731	Meth	nod Blank				Run: HGC\	/202-B_170621A		06/21	/17 11:20
Mercury			0.00002	mg/L	6E-06						
Lab ID:	LCS-110731	Labo	oratory Co	ntrol Sampl	е		Run: HGC\	/202-B_170621A		06/21	/17 11:22
Mercury			0.00207	mg/L	0.00010	102	85	115			
Lab ID:	B17061657-002BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170621A		06/21	/17 12:13
Mercury			0.00158	mg/L	0.00010	77	70	130			
Lab ID:	B17061657-002BMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170621A		06/21	/17 12:15
Mercury			0.00157	mg/L	0.00010	76	70	130	1.0	30	
Method:	E245.1									Batc	h: 110732
Lab ID:	MB-110732	Meth	nod Blank				Run: HGC\	/202-B_170621A		06/21	/17 12:17
Mercury			9E-06	mg/L	6E-06						
Lab ID:	LCS-110732	Labo	oratory Co	ntrol Sampl	е		Run: HGC\	/202-B_170621A		06/21	/17 12:18
Mercury			0.00209	mg/L	0.00010	104	85	115			
Lab ID:	B17061661-003BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170621A		06/21	/17 13:10
Mercury			0.00209	mg/L	0.00010	103	70	130			
Lab ID:	B17061661-003BMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170621A		06/21	/17 13:12
Mercury			0.00209	mg/L	0.00010	104	70	130	0.1	30	
Lab ID:	B17061657-003BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170621A		06/21	/17 15:11
Mercury			0.00216	mg/L	0.00050	97	70	130			
Lab ID:	B17061657-003BMS	D Sam	ple Matrix	Spike Dupl	licate		Run: HGC\	/202-B_170621A		06/21	/17 15:13
Mercury			0.00211	mg/L	0.00050	94	70	130	2.4	30	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Revised Date: 12/21/17 **Report Date:** 07/06/17

Project: CCRR Work Order: B17061657

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run:	HGCV202-B_	_170623B
Lab ID:	ICV	Initia	l Calibratio	on Verificat	tion Standard					06/23/	17 12:03
Mercury		(0.00197	mg/L	0.00010	99	90	110			
Method:	E245.1									Batch	n: 110835
Lab ID:	MB-110835	Meth	od Blank				Run: HGC\	/202-B_170623B		06/23/	17 12:08
Mercury		(0.00001	mg/L	6E-06						
Lab ID:	LCS-110835	Labo	ratory Co	ntrol Samp	le		Run: HGC\	/202-B_170623B		06/23/	17 12:10
Mercury		(0.00198	mg/L	0.00010	98	85	115			
Lab ID:	B17061657-013BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170623B		06/23/	17 14:51
Mercury			0.0159	mg/L	0.0010	103	70	130			
Lab ID:	B17061657-013BMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170623B		06/23/	17 14:53
Mercury			0.0159	mg/L	0.0010	103	70	130	0.0	30	
Method:	E245.1							Analytica	l Run:	HGCV202-B_	_170627A
Lab ID:	ICV	Initia	l Calibratio	on Verificat	tion Standard					06/27/	17 10:31
Mercury		(0.00195	mg/L	0.00010	98	90	110			
Method:	E245.1									Batch	n: 110934
Lab ID:	MB-110934	Meth	od Blank				Run: HGC\	/202-B_170627A		06/27/	17 10:37
Mercury		(0.00002	mg/L	6E-06						
Lab ID:	LCS-110934	Labo	ratory Co	ntrol Samp	le		Run: HGC\	/202-B_170627A		06/27/	17 10:39
Mercury		(0.00198	mg/L	0.00010	98	85	115			
Lab ID:	B17061657-013BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170627A		06/27/	17 10:43
Mercury			0.0466	mg/L	0.0010	88	70	130			
Lab ID:	B17061657-013BMS	D Sam	ple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170627A		06/27/	17 10:44
Mercury			0.0474	mg/L	0.0010	90	70	130	1.6	30	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Kathi Renier

B17061657

Date Received: 6/16/2017

Reviewed by: Reviewed Date:	BL2000\tedwards 6/21/2017			ceived by: qej rier name: FedEx
Shipping container/cooler in		Yes [✓]	No □	Not Present □
•	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes ✓	No 🗌	
Chain of custody agrees with	sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes ✓	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes 🗸	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 3.3°C, shipping container 2 was 4.5°C, shipping container 3 was 1.1°C, shipping container 4 was 1.8°C, shipping container 5 was 2.6°C, and shipping container 6 was 3.0°C.



Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information (if different than Account Information)	comments
CompanyiName Amer Foster Wheeler	Company/Name	
7 -	Contact	
7	Phone	
ĮŽ	Mailing Address	
	City, State, Zip	
a. Soitert of am	Email	
e Invoice MHard Copy	Receive Report GHard Copy Email	
Purchase Order Quote Bottle Order	Special RepartFormats:	
Project Information	Матих Codes Analysis Requested	All transment like
Project Name, PWSID, Permit, etc. Client: Texas Municipe Power Agency CCRR	A - All W - Water Soile	standard unless marked as RUSH.
Sampler Name B. Giese man Sampler Phone 512-241-2321	Society Control of the Control of th	Energy Laboratories
	B - Bioassay	
MINING CLIENTS, please indicate sample type. If one has been processed or refined, call before sending.	DW Dinking DW Water	charges and scheduling –
entification Collectic	Number of Sec Codes Codes	S TAT
tion, Interval, etc.)		ct
AF MW-14	3	
SCP MILLS		3
1041317	9	3
DUP-2		N
6 SFL MW-5 6/14/17 1030		9
7 SSP MW-2		
8 SFL MW-2		
9 SSP MW-4		5 9
10 EQBK-BJG-061417 V 1255	> > >	0
Relinquished by (print) Date/Time 6/15/17 23	Signature General Regimed by (print) Signature	16:15 Signature
Date/Time		Signature
	Temp Blank On Ice Payn	Receipt Number (cash/check only)
X N C B X N	Y N Y N CC Cash Check	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This carries as unities of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1



MUST be contacted prior to RUSH sample submittal for All turnaround times are standard unless marked as charges and scheduling -See Instructions Page Page 2 of 2 **Energy Laboratories** Comments bedoettA eed Chain of Custody & Analytical Request Record **Analysis Requested** DIENELIV DINELAC DEDD/EDT (contact laboratory) Di Other. Report Information (if different than Account Information) www.energylab.com Receive Report Differd Copy DEmail Special Report/Formats Matrix Matrix Codes V - Vegetation B - Bioassay Mailing Address Company/Name DW - Drinking Water City, State, Zip S - Soils/ W- Water 0 - Other A- Air Contact Phone Email Project : CCRR Email Mailing Address 3755 S. Capital of TX HWY, #375 Sampler Phone 512-241-2321 ☐ Unprocessed ore (NOT ground or refined)* Project Name, PWSID, Permit, etc. Client: **Bottle Order** EPA/State Compliance greg. Seitert Damectin. com CompanyiName Amec Foster Wheeler MINING CLIENTS, please indicate sample type. Austin, TX 78704 Account Information (Billing information) 512-795-0360 Receive Invoice OHard Copy Memail Greg Seitent Quote Sampler Name B. Gieselman Trust our People. Trust our Data × ☐ Byproduct 11 (e)2 material Project Information

Purchase Order

City, State, Zip

Email

Contact Phone Sample Origin State

Sample Identification	Ollection Number of Matrix Containers (See Codes	S TAT STATE OF THE
(Name, Location, Interval, etc.)	Date Time Above)	10001000000000000000000000000000000000
TORY SOM ALMIT	XX W H 355 H W X	
2 MAIN - 17	1353	
3 AZEL1:1-15	1430	
4 MNIA - 16	/5/3	
5 SE/ Mul-7	1530	
6 MAIN-II	1628	
7 SF/ MU-3	/650	
8 SFI MW-4	1745	
9 DKP-3	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	>
10		- Dated
Custody Relinquished by (print)	Date Time 1 2 Signature Levelun	MACON (print) Data Time Signature Signature
be signed Relinquished by (print)	Date/Time Signature	
Shipped By Cooler ID(s) Custody Seals	S Intact Receipt Temp Temp Blank On los CC	Payment Type Amount Receipt Number (cash/check only)
> = = = = = = = = = = = = = = = = = = =	-	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

ELJ-COC-12/16 v.1

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ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17062700 Quote ID: B3997 - CCRR

Project Name: TMPA GC Mine CCR

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 6/29/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17062700-001	MNW-18	06/27/17 14:15 06/29/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved

B17062700-005	SFL MW-7	06/28/17 12:50 06/29/17	Ground Water Same As Above
B17062700-006	MNW-15	06/28/17 13:40 06/29/17	Ground Water Same As Above
B17062700-008	EQBK-SCM-062717	06/27/17 18:30 06/29/17	Ground Water Same As Above
B17062700-009	EQBK-SCM-062817	06/28/17 11:00 06/29/17	Ground Water Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 07/13/17

Project: TMPA GC Mine CCR

Work Order: B17062700 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 12/21/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062700-001 Client Sample ID: MNW-18

Revised Date: 12/21/17 **Report Date:** 07/13/17 Collection Date: 06/27/17 14:15

DateReceived: 06/29/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	394	mg/L		1		E200.7	07/06/17 00:03 / rlh
Magnesium	63	-		1		E200.7	07/06/17 00:03 / rlh
Potassium	36	mg/L		1		E200.7	07/06/17 00:03 / rlh
odium	742	mg/L	D	4		E200.7	07/06/17 00:03 / rlh
HYSICAL PROPERTIES							
Н	7.1	s.u.	Н	0.1		A4500-H B	06/29/17 18:09 / pjw
olids, Total Dissolved TDS @ 180 C	3680	mg/L	D	40		A2540 C	06/30/17 13:54 / rik
NORGANICS							
chloride	534	mg/L	D	6		E300.0	07/04/17 20:36 / cjm
ulfate	1960	mg/L	D	20		E300.0	07/04/17 20:36 / cjm
luoride	0.2	mg/L		0.1		A4500-F C	06/30/17 12:32 / bas
METALS, TOTAL RECOVERABLE							
ntimony	ND	mg/L		0.006		E200.8	07/03/17 16:25 / car
rsenic	ND	mg/L		0.01		E200.8	07/03/17 16:25 / car
arium	0.06	mg/L		0.01		E200.8	07/03/17 16:25 / car
eryllium	ND	mg/L		0.001		E200.8	07/03/17 16:25 / car
oron	0.43	mg/L		0.05		E200.7	07/06/17 00:03 / rlh
admium	ND	mg/L		0.005		E200.8	07/03/17 16:25 / car
hromium	ND	mg/L		0.01		E200.8	07/05/17 23:31 / jpv
obalt	ND	mg/L		0.02		E200.8	07/03/17 16:25 / car
ead	0.01	mg/L		0.01		E200.8	07/03/17 16:25 / car
ithium	0.45	mg/L	D	0.04		E200.7	07/06/17 00:03 / rlh
lercury	ND	mg/L		0.001		E245.1	06/30/17 15:16 / jh
lolybdenum	ND	mg/L		0.05		E200.8	07/05/17 23:31 / jpv
elenium	ND	mg/L		0.01		E200.8	07/03/17 16:25 / car
hallium	ND	mg/L		0.002		E200.8	07/03/17 16:25 / car

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR
Lab ID: B17062700-005
Client Sample ID: SFL MW-7

Revised Date: 12/21/17
Report Date: 07/13/17
Collection Date: 06/28/17 12:50
DateReceived: 06/29/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	620	mg/L		1		E200.7	07/06/17 00:34 / rlh
Magnesium	96	mg/L		1		E200.7	07/06/17 00:34 / rlh
Potassium	47	mg/L		1		E200.7	07/06/17 00:34 / rlh
Sodium	1240	mg/L	D	4		E200.7	07/06/17 00:34 / rlh
PHYSICAL PROPERTIES							
Н	6.7	s.u.	Н	0.1		A4500-H B	06/29/17 18:20 / pjw
Solids, Total Dissolved TDS @ 180 C	6620	mg/L	D	90		A2540 C	06/30/17 13:54 / rik
NORGANICS							
Chloride	2850	mg/L	D	6		E300.0	07/04/17 23:12 / cjm
Sulfate	787	mg/L	D	20		E300.0	07/04/17 23:12 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/30/17 12:56 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/03/17 20:15 / car
Arsenic	ND	mg/L		0.01		E200.8	07/03/17 20:15 / car
Barium	0.03	mg/L		0.01		E200.8	07/03/17 20:15 / car
Beryllium	ND	mg/L		0.001		E200.8	07/05/17 23:47 / jpv
Boron	0.73	mg/L		0.05		E200.7	07/06/17 00:34 / rlh
Cadmium	ND	mg/L		0.005		E200.8	07/03/17 20:15 / car
Chromium	ND	mg/L		0.01		E200.8	07/03/17 20:15 / car
Cobalt	ND	mg/L		0.02		E200.8	07/03/17 20:15 / car
ead	ND	mg/L		0.01		E200.8	07/03/17 20:15 / car
Lithium	0.46	mg/L	D	0.04		E200.7	07/06/17 00:34 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/30/17 15:32 / jh
<i>l</i> lolybdenum	ND	mg/L		0.05		E200.8	07/03/17 20:15 / car
Selenium	0.01	mg/L		0.01		E200.8	07/03/17 20:15 / car
Гhallium	ND	mg/L		0.002		E200.8	07/03/17 20:15 / car

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D. Di in an and don to a small

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062700-006 Client Sample ID: MNW-15

Revised Date: 12/21/17 **Report Date:** 07/13/17 Collection Date: 06/28/17 13:40 DateReceived: 06/29/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	263	mg/L		1		E200.7	07/06/17 00:38 / rlh
Magnesium	49	mg/L		1		E200.7	07/06/17 00:38 / rlh
Potassium	29	mg/L		1		E200.7	07/06/17 00:38 / rlh
Sodium	468	mg/L	D	2		E200.7	07/06/17 00:38 / rlh
PHYSICAL PROPERTIES							
рН	3.6	s.u.	Н	0.1		A4500-H B	06/29/17 18:22 / pjw
Solids, Total Dissolved TDS @ 180 C	2580	mg/L	D	40		A2540 C	06/30/17 13:54 / rik
NORGANICS							
Chloride	734	mg/L	D	3		E300.0	07/04/17 23:31 / cjm
Sulfate	1290	mg/L	D	9		E300.0	07/04/17 23:31 / cjm
Fluoride	0.5	mg/L		0.1		A4500-F C	06/30/17 13:07 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/03/17 20:17 / car
Arsenic	ND	mg/L		0.01		E200.8	07/03/17 20:17 / car
Barium	0.03	mg/L		0.01		E200.8	07/03/17 20:17 / car
Beryllium	0.076	mg/L		0.001		E200.7	07/06/17 00:38 / rlh
Boron	9.67	mg/L		0.05		E200.7	07/06/17 00:38 / rlh
Cadmium	0.089	mg/L		0.005		E200.8	07/03/17 20:17 / car
Chromium	ND	mg/L		0.01		E200.8	07/03/17 20:17 / car
Cobalt	0.30	mg/L		0.02		E200.8	07/03/17 20:17 / car
_ead	ND	mg/L		0.01		E200.8	07/03/17 20:17 / car
_ithium	0.08	mg/L	D	0.02		E200.7	07/06/17 00:38 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/30/17 15:33 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/03/17 20:17 / car
Selenium	0.02	mg/L		0.01		E200.8	07/03/17 20:17 / car
Thallium	ND	mg/L		0.002		E200.8	07/03/17 20:17 / car

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062700-008 Client Sample ID: EQBK-SCM-062717

Revised Date: 12/21/17 **Report Date:** 07/13/17 Collection Date: 06/27/17 18:30 DateReceived: 06/29/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	07/06/17 00:45 / rlh
Magnesium	ND	mg/L		1		E200.7	07/06/17 00:45 / rlh
Potassium	ND	mg/L		1		E200.7	07/06/17 00:45 / rlh
Sodium	ND	mg/L		1		E200.7	07/06/17 00:45 / rlh
Couldin	110	9, _		•		2200.7	07700717 00.1071111
PHYSICAL PROPERTIES							
рН	6.4	s.u.	Н	0.1		A4500-H B	06/29/17 18:30 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/30/17 13:54 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	07/05/17 00:11 / cjm
Sulfate	ND	mg/L		1		E300.0	07/05/17 00:11 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/30/17 13:18 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/03/17 20:31 / car
Arsenic	ND	mg/L		0.01		E200.8	07/03/17 20:31 / car
Barium	ND	mg/L		0.01		E200.8	07/03/17 20:31 / car
Beryllium	ND	mg/L		0.001		E200.7	07/06/17 00:45 / rlh
Boron	ND	mg/L		0.05		E200.7	07/06/17 00:45 / rlh
Cadmium	ND	mg/L		0.05		E200.8	07/03/17 20:31 / car
Chromium	ND	mg/L		0.01		E200.8	07/03/17 20:31 / car
Cobalt	ND	mg/L		0.02		E200.8	07/03/17 20:31 / car
Lead	ND	mg/L		0.01		E200.8	07/03/17 20:31 / car
Lithium	ND	mg/L		0.01		E200.7	07/06/17 00:45 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/30/17 15:37 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/03/17 20:31 / car
Selenium	ND	mg/L		0.01		E200.8	07/03/17 20:31 / car
Thallium	ND	mg/L		0.002		E200.8	07/03/17 20:31 / car

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062700-009 Client Sample ID: EQBK-SCM-062817

Revised Date: 12/21/17 **Report Date:** 07/13/17 Collection Date: 06/28/17 11:00 DateReceived: 06/29/17

Matrix: Ground Water

				ъ.	MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	07/06/17 00:48 / rlh
Magnesium	ND	mg/L		1		E200.7	07/06/17 00:48 / rlh
Potassium	ND	mg/L		1		E200.7	07/06/17 00:48 / rlh
Sodium	ND	mg/L		1		E200.7	07/06/17 00:48 / rlh
PHYSICAL PROPERTIES							
Н	6.0	s.u.	Н	0.1		A4500-H B	06/29/17 18:33 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	06/30/17 13:54 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	07/05/17 00:30 / cjm
Sulfate	ND	mg/L		1		E300.0	07/05/17 00:30 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	06/30/17 13:25 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/03/17 20:33 / car
Arsenic	ND	mg/L		0.01		E200.8	07/03/17 20:33 / car
Barium	ND	mg/L		0.01		E200.8	07/03/17 20:33 / car
Beryllium	ND	mg/L		0.001		E200.7	07/06/17 00:48 / rlh
Boron	ND	mg/L		0.05		E200.7	07/06/17 00:48 / rlh
Cadmium	ND	mg/L		0.005		E200.8	07/03/17 20:33 / car
Chromium	ND	mg/L		0.01		E200.8	07/03/17 20:33 / car
Cobalt	ND	mg/L		0.02		E200.8	07/03/17 20:33 / car
_ead	ND	mg/L		0.01		E200.8	07/03/17 20:33 / car
Lithium	ND	mg/L		0.01		E200.7	07/06/17 00:48 / rlh
Mercury	ND	mg/L		0.001		E245.1	06/30/17 15:39 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/03/17 20:33 / car
Selenium	ND	mg/L		0.01		E200.8	07/03/17 20:33 / car
Thallium	ND	mg/L		0.002		E200.8	07/03/17 20:33 / car

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Run	: ICP203-B_	170705A
Lab ID:	ICV	7 Co	ntinuing Cal	ibration Verif	ication Standa	rd				07/05/	17 09:44
Beryllium			1.18	mg/L	0.010	95	95	105			
Boron			2.39	mg/L	0.10	96	95	105			
Calcium			24.7	mg/L	1.0	99	95	105			
Lithium			1.22	mg/L	0.10	97	95	105			
Magnesium	n		24.6	mg/L	1.0	99	95	105			
Potassium			24.5	mg/L	1.0	98	95	105			
Sodium			24.4	mg/L	1.0	98	95	105			
Method:	E200.7									Batch	n: 111112
Lab ID:	MB-111112	7 Me	thod Blank				Run: ICP20	3-B_170705A		07/05/	17 23:56
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesium	n		ND	mg/L	0.01						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-111112	7 Lal	ooratory Co	ntrol Sample			Run: ICP20	3-B_170705A		07/06/	17 00:00
Beryllium			0.256	mg/L	0.010	103	85	_ 115			
Boron			0.468	mg/L	0.10	94	85	115			
Calcium			24.0	mg/L	1.0	96	85	115			
Lithium			0.503	mg/L	0.10	101	85	115			
Magnesium	n		24.0	mg/L	1.0	96	85	115			
Potassium			25.4	mg/L	1.0	101	85	115			
Sodium			25.3	mg/L	1.0	101	85	115			
Lab ID:	B17062700-001BMS3	3 7 Sa	mple Matrix	Spike			Run: ICP20	3-B_170705A		07/06/	17 00:13
Beryllium			0.266	mg/L	0.0014	106	70	130			
Boron			0.983	mg/L	0.050	110	70	130			
Calcium			419	mg/L	1.0		70	130			Α
Lithium			0.994	mg/L	0.10	108	70	130			
Magnesiun	n		87.6	mg/L	1.0	98	70	130			
Potassium			63.6	mg/L	1.0	111	70	130			
Sodium			789	mg/L	4.2		70	130			Α
Lab ID:	B17062700-001BMSI	7 Sa	mple Matrix	Spike Duplic	ate		Run: ICP20	3-B_170705A		07/06/	17 00:24
Beryllium			0.254	mg/L	0.0014	102	70	130	4.4	20	
Boron			0.976	mg/L	0.050	109	70	130	0.8	20	
Calcium			398	mg/L	1.0		70	130	5.0	20	Α
Lithium			0.930	mg/L	0.10	95	70	130	6.7	20	
Magnesiun	n		82.0	mg/L	1.0	76	70	130	6.6	20	
-			59.2	mg/L	1.0	93	70	130	7.3	20	
Potassium											

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 111153
Lab ID:	MB-111153	6 Me	thod Blank				Run: ICP20	3-B_170705A		07/06/	17 02:16
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiur	m		ND	mg/L	0.01						
Potassium	1		ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-111153	6 Lab	oratory Cor	ntrol Sample			Run: ICP20	3-B_170705A		07/06/	17 02:19
Boron			0.462	mg/L	0.10	92	85	115			
Calcium			25.5	mg/L	1.0	102	85	115			
Lithium			0.510	mg/L	0.10	102	85	115			
Magnesiur	m		25.9	mg/L	1.0	104	85	115			
Potassium	1		26.2	mg/L	1.0	105	85	115			
Sodium			24.8	mg/L	1.0	99	85	115			
Lab ID:	B17062657-004BMS	3 6 Sar	mple Matrix	Spike			Run: ICP20	3-B_170705A		07/06/	17 02:33
Boron			1.20	mg/L	0.050	99	70	130			
Calcium			67.9	mg/L	1.0	104	70	130			
Lithium			0.556	mg/L	0.10	98	70	130			
Magnesiur	m		47.8	mg/L	1.0	104	70	130			
Potassium	1		377	mg/L	1.0		70	130			Α
Sodium			267	mg/L	1.0		70	130			Α
Lab ID:	B17062657-004BMSI	D 6 Sar	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170705A		07/06/	17 02:36
Boron			1.17	mg/L	0.050	92	70	130	2.9	20	
Calcium			65.3	mg/L	1.0	94	70	130	3.9	20	
Lithium			0.542	mg/L	0.10	95	70	130	2.5	20	
Magnesiur	m		45.8	mg/L	1.0	96	70	130	4.1	20	
Potassium	1		372	mg/L	1.0		70	130	1.4	20	Α
Sodium			262	mg/L	1.0		70	130	1.7	20	Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.8							Analytical	Run: ICPMS202-B	_170703A
Lab ID:	QCS	11 Initia	al Calibration	on Verificati	on Standard				07/03	3/17 19:09
Antimony			0.0491	mg/L	0.050	98	90	110		
Arsenic			0.0493	mg/L	0.0050	99	90	110		
Barium			0.0500	mg/L	0.10	100	90	110		
Beryllium			0.0245	mg/L	0.0010	98	90	110		
Cadmium			0.0258	mg/L	0.0010	103	90	110		
Chromium			0.0504	mg/L	0.010	101	90	110		
Cobalt			0.0501	mg/L	0.010	100	90	110		
Lead			0.0490	mg/L	0.010	98	90	110		
Molybdenu	ım		0.0462	mg/L	0.0050	92	90	110		
Selenium			0.0523	mg/L	0.0050	105	90	110		
Thallium			0.0489	mg/L	0.10	98	90	110		
Method:	E200.8								Bato	h: 111112
Lab ID:	MB-111112	11 Metl	hod Blank				Run: ICPM	S202-B_170703A	07/03	3/17 14:44
Antimony			ND	mg/L	0.00004					
Arsenic			ND	mg/L	0.00006					
Barium			ND	mg/L	0.00004					
Beryllium			ND	mg/L	0.00002					
Cadmium			ND	mg/L	0.00002					
Chromium			0.0006	mg/L	0.00009					
Cobalt			ND	mg/L	0.00003					
Lead			ND	mg/L	0.00005					
Molybdenu	ım		0.0003	mg/L	0.00007					
Selenium			ND	mg/L	0.0002					
Thallium			ND	mg/L	0.0001					
Lab ID:	LCS-111112	11 Lab	oratory Co	ntrol Sampl	e		Run: ICPM	S202-B_170703A	07/03	3/17 15:10
Antimony			0.504	mg/L	0.0010	101	85	115		
Arsenic			0.506	mg/L	0.0010	101	85	115		
Barium			0.509	mg/L	0.050	102	85	115		
Beryllium			0.284	mg/L	0.0010	114	85	115		
Cadmium			0.262	mg/L	0.0010	105	85	115		
Chromium			0.571	mg/L	0.0050	114	85	115		
Cobalt			0.556	mg/L	0.0050	111	85	115		
Lead			0.569	mg/L	0.0010	114	85	115		
Molybdenu	ım		0.529	mg/L	0.0010	106	85	115		
Selenium			0.502	mg/L	0.0010	100	85	115		
Thallium			0.565	mg/L	0.00050	113	85	115		
Lab ID:	B17062700-001BMS3	11 Sam	nple Matrix	Spike			Run: ICPM	S202-B_170703A	07/03	3/17 16:27
Antimony			0.518	mg/L	0.0010	103	70	130		
Arsenic			0.532	mg/L	0.0010	105	70	130		
Barium			0.585	mg/L	0.050	105	70	130		
Beryllium			0.214	mg/L	0.0010	86	70	130		
Cadmium			0.244	mg/L	0.0010	98	70	130		

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 111112
Lab ID:	B17062700-001BMS3	11 Sar	mple Matrix	Spike			Run: ICPM	S202-B_170703	Ą	07/03/	/17 16:27
Chromium			0.576	mg/L	0.0050	115	70	130			
Cobalt			0.541	mg/L	0.0050	108	70	130			
Lead			0.606	mg/L	0.0010	119	70	130			
Molybdenu	m		0.531	mg/L	0.0010	106	70	130			
Selenium			0.444	mg/L	0.0010	88	70	130			
Thallium			0.560	mg/L	0.00050	112	70	130			
Lab ID:	B17062700-001BMSE) 11 Sar	nple Matrix	Spike Dupli	cate		Run: ICPM	S202-B_170703	A	07/03/	/17 16:30
Antimony			0.541	mg/L	0.0010	108	70	130	4.4	20	
Arsenic			0.530	mg/L	0.0010	105	70	130	0.4	20	
Barium			0.606	mg/L	0.050	109	70	130	3.5	20	
Beryllium			0.210	mg/L	0.0010	84	70	130	2.4	20	
Cadmium			0.253	mg/L	0.0010	101	70	130	3.8	20	
Chromium			0.584	mg/L	0.0050	116	70	130	1.5	20	
Cobalt			0.538	mg/L	0.0050	107	70	130	0.6	20	
Lead			0.600	mg/L	0.0010	117	70	130	1.0	20	
Molybdenu	m		0.552	mg/L	0.0010	110	70	130	4.0	20	
Selenium			0.454	mg/L	0.0010	90	70	130	2.2	20	
Thallium			0.556	mg/L	0.00050	111	70	130	8.0	20	
Method:	E200.8									Batc	h: 111153
Lab ID:	MB-111153	11 Me	thod Blank				Run: ICPM	S202-B_170703	A	07/03/	/17 14:41
Antimony			ND	mg/L	0.00004						
Arsenic			0.00007	mg/L	0.00006						
Barium			ND	mg/L	0.00004						
Beryllium			ND	mg/L	0.00002						
Cadmium			ND	mg/L	0.00002						
Chromium			ND	mg/L	0.00009						
Cobalt			ND	mg/L	0.00003						
Lead			ND	mg/L	0.00005						
Molybdenu	m		0.0002	mg/L	0.00007						
Selenium			ND	mg/L	0.0002						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-111153	11 Lat	oratory Co	ntrol Sample)		Run: ICPM	S202-B_170703	A	07/03/	/17 15:54
Antimony			0.492	mg/L	0.0010	98	85	115			
Arsenic			0.496	mg/L	0.0010	99	85	115			
Barium			0.492	mg/L	0.050	98	85	115			
Beryllium			0.279	mg/L	0.0010	111	85	115			
Cadmium			0.255	mg/L	0.0010	102	85	115			
Caaiiiiaiii			0.556	mg/L	0.0050	111	85	115			
Chromium						110	85	115			
			0.552	mg/L	0.0050	110	00	110			
Chromium			0.552 0.555			111	85	115			
Chromium Cobalt	m			mg/L mg/L mg/L	0.0050 0.0010 0.0010						

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 111153
Lab ID:	LCS-111153	11 Lal	boratory Co	ntrol Sample			Run: ICPMS	S202-B_170703A		07/03/	17 15:54
Thallium			0.555	mg/L	0.00050	111	85	115			
Lab ID:	B17062657-004BMS	11 Sa	mple Matrix	Spike			Run: ICPMS	S202-B_170703A		07/03/	17 19:22
Antimony			0.504	mg/L	0.0010	101	70	130			
Arsenic			0.598	mg/L	0.0010	101	70	130			
Barium			0.648	mg/L	0.050	103	70	130			
Beryllium			0.226	mg/L	0.0010	91	70	130			
Cadmium			0.241	mg/L	0.0010	96	70	130			
Chromium			0.550	mg/L	0.0050	109	70	130			
Cobalt			0.535	mg/L	0.0050	107	70	130			
Lead			0.544	mg/L	0.0010	109	70	130			
Molybdenu	ım		0.876	mg/L	0.0010	96	70	130			
Selenium			0.621	mg/L	0.0010	95	70	130			
Thallium			0.565	mg/L	0.00050	113	70	130			
Lab ID:	B17062657-004BMS	D 11 Sa	mple Matrix	Spike Dupli	cate		Run: ICPMS	S202-B_170703A		07/03/	17 19:25
Antimony			0.503	mg/L	0.0010	100	70	130	0.2	20	
Arsenic			0.587	mg/L	0.0010	98	70	130	1.9	20	
Barium			0.634	mg/L	0.050	101	70	130	2.2	20	
Beryllium			0.226	mg/L	0.0010	90	70	130	0.2	20	
Cadmium			0.237	mg/L	0.0010	95	70	130	1.7	20	
Chromium			0.535	mg/L	0.0050	106	70	130	2.8	20	
Cobalt			0.525	mg/L	0.0050	105	70	130	1.8	20	
Lead			0.537	mg/L	0.0010	107	70	130	1.2	20	
Molybdenu	m		0.877	mg/L	0.0010	96	70	130	0.1	20	
Selenium			0.608	mg/L	0.0010	92	70	130	2.1	20	
Thallium			0.557	mg/L	0.00050	111	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count Re	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	Run: I	CPMS202-B_	_170705A
Lab ID:	QCS	3 Initial C	alibratio	n Verificatio	n Standard					07/05/	17 19:19
Beryllium		0.	0252	mg/L	0.0010	101	90	110			
Chromium		0.	0495	mg/L	0.010	99	90	110			
Molybdenu	ım	0.	0451	mg/L	0.0050	90	90	110			
Method:	E200.8									Batch	n: 111112
Lab ID:	MB-111112	10 Method	Blank				Run: ICPM	S202-B_170705 <i>A</i>	١	07/05/	17 23:16
Antimony		0.	0001	mg/L	0.00004						
Arsenic			ND	mg/L	0.00006						
Barium		0.0	0007	mg/L	0.00004						
Beryllium		0.0	0003	mg/L	0.00002						
Cadmium			ND	mg/L	0.00002						
Chromium		0.	0004	mg/L	0.00009						
Cobalt		0.0	0005	mg/L	0.00003						
Lead		0.	0001	mg/L	0.00005						
Molybdenu	ım		ND	mg/L	0.00005						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-111112	10 Laborat	ory Cor	ntrol Sample			Run: ICPM	S202-B_170705 <i>A</i>		07/05/	17 23:18
Antimony		C).558	mg/L	0.0010	112	85	115			
Arsenic		C).554	mg/L	0.0010	111	85	115			
Barium		C).557	mg/L	0.050	111	85	115			
Beryllium).232	mg/L	0.0010	93	85	115			
Cadmium).276	mg/L	0.0010	110	85	115			
Chromium).522	mg/L	0.0050	104	85	115			
Cobalt).501	mg/L	0.0050	100	85	115			
Lead).552	mg/L	0.0010	110	85	115			
Molybdenu	m).515	mg/L	0.0010	103	85	115			
Thallium).542	mg/L	0.00050	108	85	115			
Lab ID:	B17062700-001BMS3	3 10 Sample	Matrix	Spike			Run: ICPM	S202-B_170705 <i>A</i>		07/05/	17 23:34
Antimony		C).552	mg/L	0.0010	110	70	130			
Arsenic		C).554	mg/L	0.0010	110	70	130			
Barium		C	0.623	mg/L	0.050	111	70	130			
Beryllium		().198	mg/L	0.0010	79	70	130			
Cadmium).251	mg/L	0.0010	100	70	130			
Chromium).547	mg/L	0.0050	109	70	130			
Cobalt).531	mg/L	0.0050	106	70	130			
Lead).573	mg/L	0.0010	112	70	130			
Molybdenu	ım).538	mg/L	0.0010	108	70	130			
Thallium).542	mg/L	0.00050	108	70	130			
Lab ID:	B17062700-001BMSI) 10 Sample	Matrix	Spike Dupli	cate		Run: ICPM	S202-B_170705 <i>A</i>		07/05/	17 23:37
Antimony).574	mg/L	0.0010	115	70	130	3.9	20	
Arsenic			0.563	mg/L	0.0010	112	70	130	1.5	20	
).648	mg/L	0.050	116	70	130	3.9	20	

Qualifiers:

RL - Analyte reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 111112
Lab ID:	B17062700-001BMSE) 10 Sar	mple Matrix	Spike Duplica	ate		Run: ICPM	S202-B_170705A		07/05/	17 23:37
Beryllium			0.186	mg/L	0.0010	74	70	130	6.4	20	
Cadmium			0.255	mg/L	0.0010	102	70	130	1.9	20	
Chromium			0.513	mg/L	0.0050	102	70	130	6.3	20	
Cobalt			0.491	mg/L	0.0050	98	70	130	7.7	20	
Lead			0.571	mg/L	0.0010	112	70	130	0.4	20	
Molybdenu	ım		0.527	mg/L	0.0010	105	70	130	2.1	20	
Thallium			0.532	mg/L	0.00050	106	70	130	1.8	20	
Method:	E200.8									Batch	n: 111153
Lab ID:	MB-111153	11 Me	thod Blank				Run: ICPM	S202-B_170705A		07/05/	17 22:42
Antimony			0.00005	mg/L	0.00004						
Arsenic			ND	mg/L	0.00006						
Barium			ND	mg/L	0.00004						
Beryllium			ND	mg/L	0.00002						
Cadmium			ND	mg/L	0.00002						
Chromium			0.0003	mg/L	0.00009						
Cobalt			ND	mg/L	0.00003						
Lead			ND	mg/L	0.00005						
Molybdenu	ım		ND	mg/L	0.00005						
Selenium			0.0004	mg/L	0.0002						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-111153	11 Lab	oratory Co	ntrol Sample			Run: ICPM	S202-B_170705A		07/05/	17 22:44
Antimony			0.562	mg/L	0.0010	112	85	_ 115			
Arsenic			0.542	mg/L	0.0010	108	85	115			
Barium			0.554	mg/L	0.050	111	85	115			
Beryllium			0.214	mg/L	0.0010	86	85	115			
Cadmium			0.271	mg/L	0.0010	108	85	115			
Chromium			0.494	mg/L	0.0050	99	85	115			
Cobalt			0.478	mg/L	0.0050	96	85	115			
Lead			0.536	mg/L	0.0010	107	85	115			
Molybdenu	ım		0.500	mg/L	0.0010	100	85	115			
Selenium			0.562	mg/L	0.0010	112	85	115			
Thallium			0.531	mg/L	0.00050	106	85	115			
Lab ID:	B17062657-004BMS3	11 Sar	nple Matrix	Spike			Run: ICPM	S202-B_170705A		07/05/	17 23:00
Antimony			0.541	mg/L	0.0010	108	70	130			
Arsenic			0.619	mg/L	0.0010	103	70	130			
Barium			0.680	mg/L	0.050	108	70	130			
Beryllium			0.208	mg/L	0.0010	83	70	130			
Cadmium			0.254	mg/L	0.0010	102	70	130			
Chromium			0.522	mg/L	0.0050	104	70	130			
Cobalt			0.504	mg/L	0.0050	100	70	130			
			0.544	mg/L	0.0030	109	70	130			
Lead			0.544	1119/1	0.0010	103	7.0	100			

Qualifiers:

RL - Analyte reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	n: 111153
Lab ID:	B17062657-004BMS	3 11 Sam	nple Matrix	Spike			Run: ICPM	S202-B_170705A		07/05/	17 23:00
Selenium			0.653	mg/L	0.0010	98	70	130			
Thallium			0.541	mg/L	0.00050	108	70	130			
Lab ID:	B17062657-004BMSI	D 11 Sam	nple Matrix	Spike Du	olicate		Run: ICPM	S202-B_170705A		07/05/	17 23:03
Antimony			0.551	mg/L	0.0010	110	70	130	1.8	20	
Arsenic			0.616	mg/L	0.0010	103	70	130	0.5	20	
Barium			0.677	mg/L	0.050	107	70	130	0.3	20	
Beryllium			0.198	mg/L	0.0010	79	70	130	5.0	20	
Cadmium			0.252	mg/L	0.0010	101	70	130	1.0	20	
Chromium			0.501	mg/L	0.0050	100	70	130	4.2	20	
Cobalt			0.489	mg/L	0.0050	97	70	130	3.1	20	
Lead			0.543	mg/L	0.0010	108	70	130	0.2	20	
Molybdenu	ım		0.900	mg/L	0.0010	99	70	130	0.2	20	
Selenium			0.651	mg/L	0.0010	98	70	130	0.2	20	
Thallium			0.531	mg/L	0.00050	106	70	130	1.8	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	Run: IC	PMS206-B_	_170706A
Lab ID:	QCS	3 Init	ial Calibration	on Verificatio	on Standard					07/06/	17 22:28
Beryllium			0.0247	mg/L	0.0010	99	90	110			
Molybdenu	ım		0.0456	mg/L	0.0050	91	90	110			
Selenium			0.0503	mg/L	0.0050	101	90	110			
Method:	E200.8									Batcl	n: 111112
Lab ID:	MB-111112	11 Me	thod Blank				Run: ICPM	S206-B_170706A		07/07/	17 02:28
Antimony			ND	mg/L	0.00004			_			
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	ım		ND	mg/L	0.00003						
Selenium	4111		ND	mg/L	0.0004						
Thallium			0.00004	mg/L	7E-06						
Lab ID:	LCS-111112	11 I ah	ooratory Co	ntrol Sample			Run: ICPM:	S206-B 170706A		07/07/	17 02:34
Antimony	2002	· · Lui	0.515	mg/L	0.0010	103	85	115	•	01/01/	17 02.04
Arsenic			0.500	mg/L	0.0010	100	85	115			
Barium			0.502	mg/L	0.050	100	85	115			
Beryllium			0.235	mg/L	0.0010	94	85	115			
Cadmium			0.261	mg/L	0.0010	105	85	115			
Chromium			0.502	mg/L	0.0010	100	85	115			
Cobalt			0.499	mg/L	0.0050	100	85	115			
Lead			0.433	mg/L	0.0030	103	85	115			
Molybdenu	ım		0.470	mg/L	0.0010	94	85	115			
Selenium	4111		0.502	mg/L	0.0010	100	85	115			
Thallium			0.554	mg/L	0.0010	111	85	115			
Lab ID:	B17062700-001BMS3	11 000		-						07/07/	47 00.20
Antimony	B17002700-001BW33	ıı Sai	mple Matrix 0.509	mg/L	0.0010	102	70	S206-B_170706A 130		07/07/	17 02:38
•											
Arsenic			0.495	mg/L	0.0010	98	70 70	130			
Barium			0.548	mg/L	0.050	98	70 70	130			
Beryllium			0.226	mg/L	0.0010	90	70	130			
Cadmium			0.236	mg/L	0.0010	95	70	130			
Chromium			0.507	mg/L	0.0050	101	70	130			
Cobalt			0.494	mg/L	0.0050	98	70	130			
Lead			0.499	mg/L	0.0010	97	70	130			
Molybdenu	ım		0.479	mg/L	0.0010	96	70	130			
Selenium			0.409	mg/L	0.0010	82	70	130			
Thallium			0.512	mg/L	0.00050	102	70	130			

Qualifiers:

RL - Analyte reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 111112
Lab ID:	B17062700-001BMSD	11 Sar	mple Matrix	Spike Duplic	ate		Run: ICPM	S206-B_170706A		07/07/	17 02:41
Antimony			0.515	mg/L	0.0010	103	70	130	1.3	20	
Arsenic			0.501	mg/L	0.0010	99	70	130	1.2	20	
Barium			0.563	mg/L	0.050	101	70	130	2.7	20	
Beryllium			0.226	mg/L	0.0010	90	70	130	0.2	20	
Cadmium			0.238	mg/L	0.0010	95	70	130	0.6	20	
Chromium			0.518	mg/L	0.0050	103	70	130	2.3	20	
Cobalt			0.493	mg/L	0.0050	98	70	130	0.2	20	
Lead			0.480	mg/L	0.0010	94	70	130	3.9	20	
Molybdenu	m		0.486	mg/L	0.0010	97	70	130	1.4	20	
Selenium			0.424	mg/L	0.0010	85	70	130	3.4	20	
Thallium			0.504	mg/L	0.00050	101	70	130	1.6	20	
Method:	E200.8									Batch	n: 111153
Lab ID:	MB-111153	11 Me	thod Blank				Run: ICPM	S206-B 170706A		07/07/	17 03:25
Antimony			ND	mg/L	0.00004			_			
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	m		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.00003	mg/L	7E-06						
Lab ID:	LCS-111153	11 Lab	oratory Co	ntrol Sample			Run: ICPM	S206-B_170706 <i>A</i>		07/07/	17 03:35
Antimony			0.518	mg/L	0.0010	104	85	115			
Arsenic			0.493	mg/L	0.0010	99	85	115			
Barium			0.503	mg/L	0.050	101	85	115			
Beryllium			0.229	mg/L	0.0010	92	85	115			
Cadmium			0.256	mg/L	0.0010	102	85	115			
Chromium			0.483	mg/L	0.0050	97	85	115			
Cobalt			0.478	mg/L	0.0050	96	85	115			
Lead			0.529	mg/L	0.0010	106	85	115			
Molybdenu	m		0.468	mg/L	0.0010	94	85	115			
Selenium			0.494	mg/L	0.0010	99	85	115			
Thallium			0.568	mg/L	0.00050	114	85	115			
Lab ID:	B17062859-008DMS3	11 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170706 <i>A</i>		07/07/	17 03:49
Antimony			0.502	mg/L	0.0010	100	70	130			
Arsenic			0.480	mg/L	0.0010	96	70	130			
Barium			0.484	mg/L	0.050	97	70	130			
Beryllium			0.222	mg/L	0.0010	89	70	130			
Cadmium			0.255	mg/L	0.0010	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 111153
Lab ID:	B17062859-008DMS3	11 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170706A		07/07/	17 03:49
Chromium			0.480	mg/L	0.0050	96	70	130			
Cobalt			0.474	mg/L	0.0050	95	70	130			
Lead			0.466	mg/L	0.0010	93	70	130			
Molybdenu	m		0.452	mg/L	0.0010	90	70	130			
Selenium			0.506	mg/L	0.0010	101	70	130			
Thallium			0.534	mg/L	0.00050	107	70	130			
Lab ID:	B17062859-008DMSE) 11 Sar	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_170706A		07/07/	17 03:52
Antimony			0.511	mg/L	0.0010	102	70	130	1.8	20	
Arsenic			0.491	mg/L	0.0010	98	70	130	2.4	20	
Barium			0.493	mg/L	0.050	98	70	130	1.7	20	
Beryllium			0.229	mg/L	0.0010	92	70	130	2.9	20	
Cadmium			0.259	mg/L	0.0010	104	70	130	1.6	20	
Chromium			0.486	mg/L	0.0050	97	70	130	1.2	20	
Cobalt			0.484	mg/L	0.0050	97	70	130	2.2	20	
Lead			0.482	mg/L	0.0010	96	70	130	3.5	20	
Molybdenu	m		0.457	mg/L	0.0010	91	70	130	1.0	20	
Selenium			0.491	mg/L	0.0010	98	70	130	2.9	20	
Thallium			0.551	mg/L	0.00050	110	70	130	3.2	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	Run:	HGCV202-B_	_170630A
Lab ID:	ICV	Initi	al Calibratio	on Verification	Standard					06/30/	17 13:51
Mercury			0.00204	mg/L	0.00010	102	90	110			
Method:	E245.1									Batch	h: 111118
Lab ID:	MB-111118	Met	hod Blank				Run: HGCV	′202-B_170630A		06/30/	17 14:50
Mercury			8E-06	mg/L	6E-06						
Lab ID:	LCS-111118	Lab	oratory Cor	ntrol Sample			Run: HGCV	′202-B_170630A		06/30/	17 14:52
Mercury			0.00204	mg/L	0.00010	102	85	115			
Lab ID:	B17062700-003BMS	San	nple Matrix	Spike			Run: HGCV	′202-B_170630A		06/30/	17 15:26
Mercury			0.00188	mg/L	0.00010	93	70	130			
Lab ID:	B17062700-003BMSI	D San	nple Matrix	Spike Duplica	ate		Run: HGCV	′202-B_170630A		06/30/	17 15:28
Mercury			0.00188	mg/L	0.00010	93	70	130	0.2	30	
Method:	E245.1							Analytica	Run:	HGCV202-B_	_170703A
Lab ID:	ICV	Initi	al Calibratio	on Verification	Standard					07/03/	17 09:28
Mercury			0.00192	mg/L	0.00010	96	90	110			
Method:	E245.1									Batcl	h: 111139
Lab ID:	MB-111139	Met	hod Blank				Run: HGCV	'202-B_170703A		07/03/	17 11:06
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-111139	Lab	oratory Cor	ntrol Sample			Run: HGCV	′202-B_170703A		07/03/	17 11:07
Mercury			0.00201	mg/L	0.00010	100	85	115			
Lab ID:	B17062861-001AMS	San	nple Matrix	Spike			Run: HGCV	′202-B_170703A		07/03/	17 11:36
Mercury			0.00203	mg/L	0.00010	101	70	130			
Lab ID:	B17062861-001AMSI	D Sar	nple Matrix	Spike Duplica	ate		Run: HGCV	/202-B_170703A		07/03/	17 11:38
Mercury			0.00202	mg/L	0.00010	100	70	130	0.6	30	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte	Co	unt Resi	ult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method	: A2540 C									Batch	n: 111143
Lab ID:	B17062664-006A DUP	Sample D	uplicat	te			Run: BAL#	SD-15_170630D		06/30/	17 13:54
Solids, 7	Total Dissolved TDS @ 180 C	34	40	mg/L	40				0.5	5	
Lab ID:	B17062700-002A DUP	Sample D	uplicat	te			Run: BAL #	SD-15_170630D		06/30/	17 13:54
Solids, 7	Total Dissolved TDS @ 180 C	56	30	mg/L	94				0.2	5	
Lab ID:	LCS-111143	Laboratory	/ Cont	rol Sample	Э		Run: BAL #	SD-15_170630D		06/30/	17 13:54
Solids, T	Total Dissolved TDS @ 180 C	9	75	mg/L	10	97	90	110			
Lab ID:	MB-111143	Method BI	ank				Run: BAL#	SD-15_170630D		06/30/	17 13:54
Solids, T	Total Dissolved TDS @ 180 C	; N	ND	mg/L	4						

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count F	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170630A
Lab ID:	ICV	Initial	Calibratio	on Verification S	Standard					06/30/	17 09:40
Fluoride			0.940	mg/L	0.10	94	90	110			
Method:	A4500-F C									Batch:	R282467
Lab ID:	MBLK	Metho	d Blank				Run: MAN-	TECH_170630A		06/30/	17 09:48
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Labora	atory For	tified Blank			Run: MAN-	TECH_170630A		06/30/	17 09:51
Fluoride			0.990	mg/L	0.10	99	90	110			
Lab ID:	B17062664-002AMS	Sampl	e Matrix	Spike			Run: MAN-	TECH_170630A		06/30/	17 12:13
Fluoride			0.960	mg/L	0.10	85	80	120			
Lab ID:	B17062664-002AMS	D Sampl	e Matrix	Spike Duplicate	e		Run: MAN-	TECH_170630A		06/30/	17 12:16
Fluoride			1.02	mg/L	0.10	91	80	120	6.1	10	
Lab ID:	B17062700-005AMS	Sampl	e Matrix	Spike			Run: MAN-	TECH_170630A		06/30/	17 12:58
Fluoride			1.00	mg/L	0.10	92	80	120			
Lab ID:	B17062700-005AMS	D Sampl	e Matrix	Spike Duplicate	e		Run: MAN-	TECH_170630A		06/30/	17 13:01
Fluoride			1.01	mg/L	0.10	93	80	120	1.0	10	

Qualifiers:



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PH	ISC _101-B_	_170629A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	tion Standard					06/29/	17 08:41
рН			7.98	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R282329
Lab ID:	B17062700-007ADUF	P Sam	nple Duplica	ate			Run: PHSC	_101-B_1706	29A	06/29/	17 18:28
рН			7.31	s.u.	0.10				0.3	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date: 07/13/17Project:TMPA GC Mine CCRWork Order: B17062700

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 2	_170703A
Lab ID:	ICV	2 Init	ial Calibratio	on Verification Sta	andard					07/03/	/17 13:02
Chloride			2.20	mg/L	1.0	98	90	110			
Sulfate			8.69	mg/L	1.0	97	90	110			
Method:	E300.0									Batch:	R282595
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_17	0703A	07/03/	/17 13:21
Chloride			ND	mg/L	0.002						
Sulfate			ND	mg/L	0.03						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 2_17	0703A	07/03/	/17 13:41
Chloride			10.4	mg/L	1.0	104	90	110			
Sulfate			31.1	mg/L	1.0	104	90	110			
Lab ID:	B17062700-003AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 2_17	0703A	07/04/	/17 22:13
Chloride			5870	mg/L	12	96	90	110			
Sulfate			8370	mg/L	37	106	90	110			
Lab ID:	B17062700-003AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0703A	07/04/	/17 22:33
Chloride			5850	mg/L	12	95	90	110	0.3	20	
Sulfate			8350	mg/L	37	106	90	110	0.2	20	
Lab ID:	B17062701-003AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 2_17	0703A	07/05/	/17 02:47
Chloride			554	mg/L	3.1	108	90	110			
Sulfate			2520	mg/L	9.2	106	90	110			
Lab ID:	B17062701-003AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_17	0703A	07/05/	/17 03:06
Chloride			554	mg/L	3.1	108	90	110	0.0	20	
Sulfate			2510	mg/L	9.2	106	90	110	0.3	20	

Qualifiers:

B17062700

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Gina McCartney Date Received: 6/29/2017 Reviewed by: Received by: rs4 BL2000\tedwards Reviewed Date: 7/5/2017 Carrier name: FedEx Shipping container/cooler in good condition? Yes √ No □ Not Present □ Custody seals intact on all shipping container(s)/cooler(s)? Yes √ No 🔲 Not Present | Custody seals intact on all sample bottles? Not Present ✓ No 🔲 Yes Chain of custody present? Yes √ No □ Chain of custody signed when relinquished and received? Yes √ No 🔲 Chain of custody agrees with sample labels? Yes √ No 🔲 Samples in proper container/bottle? Yes √ No □ Sample containers intact? Yes √ No 🗌 Sufficient sample volume for indicated test? Yes √ No 🗌 All samples received within holding time? Yes √ No 🗌 (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Temp Blank received in all shipping container(s)/cooler(s)? Not Applicable Yes √ No 🔲 Container/Temp Blank temperature: °C Melted Ice Water - VOA vials have zero headspace? No VOA vials submitted Yes No □ $\overline{\mathsf{V}}$ Water - pH acceptable upon receipt? Yes √ No 🗌 Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The temperature of the sample(s) for shipping container 1 was 2.3°C, shipping container 2 was 2.1°C and shipping container 3 was 1.9°C.

Radiochemistry analysis on separate work order per Shari Endy, Energy Laboratories Project Manager.

<u> </u>	
FER	

Trust our People, Trust our Data.

Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information	Report Information (if different than Account Information)		Comments	9 2
Company/Name AME Taste Wheeler	Company/Name			=	7 7
18/16	Contact			<u>ğ</u>	Greg (7
Phone 518-241-2310	Phone			Q'S	AUCSTONS
Mailing Address 3755 S Capital of 12 thy 375	Mailing Address				2
tate, Zip ASIM TX 78704	City, State, Zip			MWM-1	7
Email Great Serby a greet in an	Email			Ş	
Carland Copy Vernail Receive Report	Receive Report ☐Hard Copy ☐Email	□E mail		1	Prosible 1150 Hz
Purchase Order Quote 3997 Bottle Order	Special Report/Formats:	□ EDD/EDT (contect laboratory) □ Other		*Frill	Tay A
Project Information	Matrix Codes	Analysis Requested	7		
Project Name, PWSID, Permit, etc. TMPA GC Mine CC R	A - Air W - Water				All tumaround times are standard unless marked as
, ,					RUSH.
EPA/State Compl	V - Vegetation B - Bioassay				Energy Laboratories MUST be contacted prior to
MINING CLIENTS, please indicate sample type. *If ore has been processed or refined, call before sending. □ Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)*	O- Other DW - Drinking			ttache	RUSH sample submittal for charges and scheduling – See Instructions Page
Collection	Matrix			A 6	
Date Time	Containers (See Codes Above)			es FAT	Laboratory Des Chris
1 MNW-18	× 3				A1701
2 MNW-17 6-27-17 1545	×				
3 MNW-16	* \				100-
4 KP MW-6 6-28-1/1030	X				50C-
5 SFL MW-7 6-28-17 1350	× X				1000
6 MWW-15 6-8-1 (340	*	-			900-
11-N-11	46.9 ×				700-
<-SCM-062717 6	X				800-
* EQBI Sem-06-28-17 1100	\ \				7009
11	* * +				0/0-//
T Relinguished by (print) Macon 628-17 1630	Ramp C. Morn	Received by (print)	Date/Time	Signature	line (
ed Relinquiated by (print)		Received by Laboratory (print)	L1/16/11/2	O O Signatur	2
A STATE OF THE STA	LV SOM		-	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Simples By Cooler IC(s) Custody Seals Intact Receipt lemp	Temp Blank On Ice	Payment Type CC Cash Check	Amount	Receipt No	Receipt Number (cashehack only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

Page 30 of 30

ANALYTICAL SUMMARY REPORT

July 31, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17062770 Quote ID: B3997 - CCRR

Project Name: TMPA GC Mine CCR

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 6/29/2017 for analysis.

Lab ID	Client Sample ID	Collect Dat	e Receive Date	e Matrix	Test
B17062770-001	MNW-18	06/27/17 1	14:15 06/29/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17062770-005	SFL MW-7	06/28/17 1	12:50 06/29/17	Ground Water	Same As Above
B17062770-006	MNW-15	06/28/17	7 13:40 06/29/17	Ground Water	Same As Above
B17062770-008	EQBK-SCM-062717	06/27/1	18:30 06/29/17	Ground Water S	Same As Above
B17062770-009	EQBK-SCM-062817	06/28/17	7 11:00 06/29/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 07/31/17

CLIENT: Texas Municipal Power Agency

Project: TMPA GC Mine CCR

Work Order: B17062770 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062770-001 Client Sample ID: MNW-18

Report Date: 07/31/17 Collection Date: 06/27/17 14:15 DateReceived: 06/29/17

Matrix: Ground Water

Analyses	Result L	Inite	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Result	Jilits	Qualifiers	NL .	QCL	Metriou	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	2.3 p	oCi/L				E903.0	07/18/17 12:24 / eli-ca
Radium 226 precision (±)	0.52 p	oCi/L				E903.0	07/18/17 12:24 / eli-ca
Radium 226 MDC	0.15 p	oCi/L				E903.0	07/18/17 12:24 / eli-ca
Radium 228	3.7 p	oCi/L				RA-05	07/13/17 14:11 / eli-ca
Radium 228 precision (±)	1.2 p	oCi/L				RA-05	07/13/17 14:11 / eli-ca
Radium 228 MDC	1.4 p	oCi/L				RA-05	07/13/17 14:11 / eli-ca
Radium 226 + Radium 228	6.1 p	oCi/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3 p	oCi/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 MDC	1.4 p	oCi/L				A7500-RA	07/24/17 16:15 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR
Lab ID: B17062770-005
Client Sample ID: SFL MW-7

Report Date: 07/31/17 **Collection Date:** 06/28/17 12:50 **DateReceived:** 06/29/17

Matrix: Ground Water

Analyses	Result Ur	nits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.1 pC	Ci/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 precision (±)	0.28 pC	Ci/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 MDC	0.15 pC	Ci/L				E903.0	07/18/17 14:12 / eli-ca
Radium 228	1.5 pC	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 precision (±)	0.89 pC	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 MDC	1.4 pC	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 226 + Radium 228	2.6 pC	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9 pC	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 MDC	1.4 pC	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062770-006 Client Sample ID: MNW-15

Report Date: 07/31/17 Collection Date: 06/28/17 13:40 DateReceived: 06/29/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.43	pCi/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 MDC	0.15	pCi/L				E903.0	07/18/17 14:12 / eli-ca
Radium 228	1.1	pCi/L	U			RA-05	07/13/17 14:10 / eli-ca
Radium 228 precision (±)	0.92	pCi/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	07/13/17 14:10 / eli-ca
Radium 226 + Radium 228	1.5	pCi/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/24/17 16:15 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062770-008 Client Sample ID: EQBK-SCM-062717

Report Date: 07/31/17 Collection Date: 06/27/17 18:30 DateReceived: 06/29/17

Matrix: Ground Water

Analyses	Result U	Inits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.06 p	Ci/L	U			E903.0	07/18/17 14:12 / eli-ca
Radium 226 precision (±)	0.10 p	Ci/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 MDC	0.16 p	Ci/L				E903.0	07/18/17 14:12 / eli-ca
Radium 228	2.2 p	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 precision (±)	1.1 p	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 MDC	1.5 p	Ci/L				RA-05	07/13/17 14:10 / eli-ca
Radium 226 + Radium 228	2.3 p	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1 p	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 MDC	1.5 p	Ci/L				A7500-RA	07/24/17 16:15 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA GC Mine CCR Lab ID: B17062770-009 Client Sample ID: EQBK-SCM-062817

Report Date: 07/31/17 Collection Date: 06/28/17 11:00 DateReceived: 06/29/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.09	pCi/L	U			E903.0	07/18/17 14:12 / eli-ca
Radium 226 precision (±)	0.11	pCi/L				E903.0	07/18/17 14:12 / eli-ca
Radium 226 MDC	0.16	pCi/L				E903.0	07/18/17 14:12 / eli-ca
Radium 228	1.2	pCi/L	U			RA-05	07/13/17 14:10 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	07/13/17 14:10 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	07/13/17 14:10 / eli-ca
Radium 226 + Radium 228	1.3	pCi/L	U			A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	07/24/17 16:15 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	07/24/17 16:15 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:07/31/17Project:TMPA GC Mine CCRWork Order:B17062770

Analyte	Result	Units	RL %	REC	Low Limit	High L	imit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA	226-8551
Lab ID: LCS-RA226-8551	Laboratory Cor	trol Sample			Run: G542	M-2_170	703A		07/18	/17 12:24
Radium 226	8.5	pCi/L		84	80		120			
Lab ID: MB-RA226-8551	Method Blank				Run: G542	M-2_170	703A		07/18	3/17 12:24
Radium 226	0.1	pCi/L								U
Radium 226 precision (±)	0.1	pCi/L								
Radium 226 MDC	0.2	pCi/L								
Lab ID: C17060927-001CMS	Sample Matrix	Spike			Run: G542	M-2_170	703A		07/18	3/17 12:24
Radium 226	20	pCi/L		82	70		130			
Lab ID: C17060927-001CMSD	Sample Matrix	Spike Duplicate			Run: G542	M-2_170	703A		07/18	/17 12:24
Radium 226	20	pCi/L		86	70		130	4.8	20	
Method: E903.0									Batch: RA	226-8558
Lab ID: LCS-RA226-8558	Laboratory Cor	trol Sample			Run: G542	M-2_170	712B		07/24	/17 08:57
Radium 226	9.7	pCi/L		96	80		120			
Lab ID: MB-RA226-8558	Method Blank				Run: G542	M-2_170	712B		07/24	/17 08:57
Radium 226	0.1	pCi/L								U
Radium 226 precision (±)	0.1	pCi/L								
Radium 226 MDC	0.2	pCi/L								
Lab ID: C17060841-002DMS	Sample Matrix	Spike			Run: G542	M-2_170	712B		07/24	/17 08:58
Radium 226	21	pCi/L		103	70		130			
Lab ID: C17060841-002DMSD	Sample Matrix	Spike Duplicate			Run: G542	M-2_170	712B		07/24	/17 08:58
Radium 226	19	pCi/L		92	70		130	11	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date: 07/31/17Project:TMPA GC Mine CCRWork Order: B17062770

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPI	OLimit Qual
Method: RA-05		Ba	atch: RA228-5535
Lab ID: LCS-228-RA226-8551	Laboratory Control Sample	Run: TENNELEC-3_170703A	07/13/17 12:24
Radium 228	9.5 pCi/L	89 80 120	
Lab ID: MB-RA226-8551	Method Blank	Run: TENNELEC-3_170703A	07/13/17 12:24
Radium 228	0.5 pCi/L	_	U
Radium 228 precision (±)	0.8 pCi/L		
Radium 228 MDC	1 pCi/L		
Lab ID: B17062770-010CMS	Sample Matrix Spike	Run: TENNELEC-3_170703A	07/13/17 12:24
Radium 228	29 pCi/L	102 70 130	
Lab ID: B17062770-010CMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170703A	07/13/17 12:24
Radium 228	31 pCi/L	111 70 130 6.7	20
Method: RA-05		Ва	atch: RA228-5541
Lab ID: LCS-228-RA226-8558	Laboratory Control Sample	Run: TENNELEC-3_170712A	07/19/17 11:54
Radium 228	8.9 pCi/L	87 80 <u>-</u> 120	
Lab ID: MB-RA226-8558	Method Blank	Run: TENNELEC-3_170712A	07/19/17 11:54
Radium 228	0.2 pCi/L		U
Radium 228 precision (±)	0.6 pCi/L		
Radium 228 MDC	1 pCi/L		
Lab ID: C17060841-003DMS	Sample Matrix Spike	Run: TENNELEC-3_170712A	07/19/17 13:27
Radium 228	21 pCi/L	97 70 130	
Lab ID: C17060841-003DMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170712A	07/19/17 13:27
Radium 228	21 pCi/L	98 70 130 0.7	20
Method: RA-05		Bate	ch: RA228-5544R
Lab ID: LCS-228-RA226-8564	Laboratory Control Sample	Run: TENNELEC-3_170714C	07/27/17 11:41
Radium 228	9.8 pCi/L	95 80 120	
Lab ID: MB-RA226-8564	Method Blank	Run: TENNELEC-3_170714C	07/27/17 11:41
Radium 228	0.3 pCi/L	-	U
Radium 228 precision (±)	0.8 pCi/L		
Radium 228 MDC	1 pCi/L		
Lab ID: C17060746-002CMS	Sample Matrix Spike	Run: TENNELEC-3_170714C	07/27/17 11:41
Radium 228	18 pCi/L	80 70 130	
Lab ID: C17060746-002CMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170714C	07/27/17 11:41
Radium 228	18 pCi/L	82 70 <u>130</u> 1.1	20

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Gina McCartney

B17062770

Date Received: 6/29/2017

0 1	•			
Reviewed by:	BL2000\tedwards		Re	ceived by: rs4
Reviewed Date:	7/5/2017		Car	rier name: FedEx
Shipping container/cooler in	good condition?	Yes [√]	No 🖂	Not Present ☐
•		_	_	
Custody seals intact on all si	nipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗸	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🔽	No 🗌	
Chain of custody agrees with	sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes √	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res CI, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C Melted Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes √	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 2.3°C, shipping container 2 was 2.1°C and shipping container 3 was 1.9°C.

0	toor People, Past our Deta.
ENERGY	Trust our Propie.

Chain of Custody & Analytical Request Record

Account Information (Billing Information)	Report Information (if different than Account Information)	(comments	9
Companyithems AMEL Taste Whop el	Company/Name	7	1/2 Ed Fr
12	Contact		• 1
Phone 512-341-3310	Phone	arv	- Cars 1.970
755 Scorblot F. H.	A 27 c Melling Address		30
78704 °	City, Starts, Zip	TANK TO THE TANK T	of the Region Just
Emal Greg. Selpil@grectu.com,	Emai	3	3. nm
Cartard copy Vernal	mail Receive Report CHard Copy ClEmail	TIA	るがあれてお
Purchase Order Quote 3997 Bottle Order	Special Report Formula:	□ Other	366+ 136 mily 201 + 236
Project Information	веро	Analysis Requested	One or self has
Project Name, PMSID, Permit, etc. TMPA GC Mine CC	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	•	standard unless marked 85
r Phone	Solids Solids	1 Ovorille	Energy Laboratories
Sample Orgin State	_	10 10 10 NOV	MUST be contacted prior to RUSH sample submittal for
ar se	100 o o o o o o o o o o o o o o o o o o	CANTO WOLK	charges and scheduling See Instructions Page
☐ Byproduct 11 (e)2 material ☐ Unprocessed one (NOT ground or refined)*	Ī	トマーナでによくも	
Collectio	Containing (See Code	→ 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1	
1 MAK - (8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	B17063770	18-00-00/8-07-18-
17 6-37-11	45 3		777002
3 MNW-16 6-27-11/17	₹ ×		500-
1-10-XE-9	30 # X		500_
2-MW-7	X 4		Sor
6 MMW-15	× + 0+		2006
7 MNW-11	10 Hea X		700-
· tob(-5cm-062717 6-37-17 183	× + &		2000
8 EABI - San - abalit 10	X		100
10 Dup-1 627-17	× + +		N-O/D
Record MUST Settly of Corty Macon 628-17-1630	Ramp (North	DeteTime	Signature
Reinquiriped by (print)	Received by La	(print) (5/29/17 10:0)	
Shipped By Cooler (D(s) Custody Saals Intact Rec	Temp Blank On Ice Pay	Type	Receipt Number (cashelack only)
Z >> 00 C Z >>	YN YN CC Cash	Check	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

EU-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

December 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17071798

Project Name: CCRR

analysis.

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 7/21/2017 for

Quote ID: B3997

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17071798-001	MNW-18	07/19/17 12:15 07/21/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved

B17071798-005	EQBK/SCM/071917	07/19/17 17:00 07/21/17	Ground Water Same As Above
B17071798-006	MNW-15	07/20/17 10:30 07/21/17	Ground Water Same As Above
B17071798-007	SFL MW-7	07/20/17 11:45 07/21/17	Ground Water Same As Above
B17071798-009	EQBK/SCM/072017	07/20/17 12:25 07/21/17	Ground Water Same As Above
B17071798-010	Dup-1	07/19/17 0:00 07/21/17	Ground Water Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CCRR

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/21/17 **Report Date:** 08/09/17

Work Order: B17071798 CASE NARRATIVE

Revised Report 12/21/2017

CLIENT:

Project:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-001

Client Sample ID: MNW-18

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/19/17 12:15

DateReceived: 07/21/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	440	mg/L		1		E200.7	07/29/17 01:13 / slf
Magnesium	71	-		1		E200.7	07/29/17 01:13 / slf
Potassium	37	Ū		1		E200.7	07/28/17 04:57 / slf
Sodium	742	mg/L	D	4		E200.7	07/29/17 01:13 / slf
PHYSICAL PROPERTIES							
pH	7.0	s.u.	Н	0.1		A4500-H B	07/21/17 14:46 / pjw
Solids, Total Dissolved TDS @ 180 C	4050	mg/L	D	40		A2540 C	07/21/17 15:28 / mnh
INORGANICS							
Chloride	544	mg/L	D	6		E300.0	07/28/17 03:54 / cjm
Sulfate	2150	mg/L	D	20		E300.0	07/28/17 03:54 / cjm
Fluoride	0.2	mg/L		0.1		A4500-F C	07/24/17 09:33 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/26/17 06:04 / jpv
Arsenic	ND	mg/L		0.01		E200.8	07/26/17 06:04 / jpv
Barium	0.06	mg/L		0.01		E200.8	07/26/17 06:04 / jpv
Beryllium	ND	mg/L		0.001		E200.8	07/26/17 06:04 / jpv
Boron	0.44	mg/L		0.05		E200.8	07/26/17 06:04 / jpv
Cadmium	ND	mg/L		0.005		E200.8	07/26/17 06:04 / jpv
Chromium	ND	mg/L		0.01		E200.8	07/26/17 06:04 / jpv
Cobalt	ND	mg/L		0.02		E200.8	07/26/17 06:04 / jpv
Lead	ND	mg/L		0.01		E200.8	07/26/17 06:04 / jpv
Lithium	0.44	mg/L	D	0.04		E200.7	07/29/17 01:13 / slf
Mercury	ND	mg/L		0.001		E245.1	07/25/17 13:00 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/31/17 20:57 / rlh
Selenium	ND	mg/L		0.01		E200.8	07/26/17 06:04 / jpv
Thallium	ND	mg/L		0.002		E200.8	07/26/17 06:04 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-005 Client Sample ID: EQBK/SCM/071917

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/19/17 17:00 DateReceived: 07/21/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	07/29/17 01:40 / slf
Magnesium	ND	mg/L		1		E200.7	07/29/17 01:40 / slf
Potassium	ND	mg/L		1		E200.7	07/28/17 05:25 / slf
Sodium	ND	Ū		1		E200.7	07/29/17 01:40 / slf
Couldin	112	mg/ =				2200.7	01/20/11 01:10 / 01
PHYSICAL PROPERTIES							
pH	6.6	s.u.	Н	0.1		A4500-H B	07/21/17 14:57 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	07/21/17 15:30 / mnh
INORGANICS							
Chloride	ND	mg/L		1		E300.0	07/28/17 05:12 / cjm
Sulfate	ND	mg/L		1		E300.0	07/28/17 05:12 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	07/24/17 09:50 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/26/17 06:35 / jpv
Arsenic	ND	mg/L		0.01		E200.8	07/26/17 06:35 / jpv
Barium	ND	mg/L		0.01		E200.8	07/26/17 06:35 / jpv
Beryllium	ND	mg/L		0.001		E200.8	07/26/17 06:35 / jpv
Boron	ND	mg/L		0.05		E200.8	07/26/17 06:35 / jpv
Cadmium	ND	mg/L		0.005		E200.8	07/26/17 06:35 / jpv
Chromium	ND	mg/L		0.01		E200.8	07/26/17 06:35 / jpv
Cobalt	ND	mg/L		0.02		E200.8	07/26/17 06:35 / jpv
Lead	ND	mg/L		0.01		E200.8	07/26/17 06:35 / jpv
Lithium	ND	mg/L		0.01		E200.7	07/29/17 01:40 / slf
Mercury	ND	mg/L		0.001		E245.1	07/25/17 13:07 / jh
Molybdenum	ND	mg/L		0.05		E200.7	07/29/17 01:40 / slf
Selenium	ND	mg/L		0.01		E200.8	07/26/17 06:35 / jpv
Thallium	ND	mg/L		0.002		E200.8	07/26/17 06:35 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-006

Client Sample ID: MNW-15

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/20/17 10:30

DateReceived: 07/21/17

Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
MAJOR IONS						
Calcium	275	mg/L		1	E200.7	07/29/17 01:44 / slf
Magnesium		mg/L		1	E200.7	07/29/17 01:44 / slf
Potassium	27	-		1	E200.7	07/28/17 05:29 / slf
Sodium	446	mg/L	D	2	E200.7	07/29/17 01:44 / slf
PHYSICAL PROPERTIES						
рН	3.7	s.u.	Н	0.1	A4500-	H B 07/21/17 15:00 / pjw
Solids, Total Dissolved TDS @ 180 C	2690	mg/L	D	40	A2540	C 07/21/17 15:30 / mnh
INORGANICS						
Chloride	704	mg/L	D	3	E300.0	07/28/17 05:31 / cjm
Sulfate	1240	mg/L	D	9	E300.0	07/28/17 05:31 / cjm
Fluoride	0.5	mg/L		0.1	A4500-	F C 07/24/17 09:57 / bas
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.006	E200.8	07/26/17 06:38 / jpv
Arsenic	ND	mg/L		0.01	E200.8	07/26/17 06:38 / jpv
Barium	0.02	mg/L		0.01	E200.8	07/26/17 06:38 / jpv
Beryllium	0.068	mg/L		0.001	E200.8	07/26/17 06:38 / jpv
Boron	9.38	mg/L		0.05	E200.7	07/29/17 01:44 / slf
Cadmium	0.091	mg/L		0.005	E200.8	07/26/17 06:38 / jpv
Chromium	ND	mg/L		0.01	E200.8	07/26/17 06:38 / jpv
Cobalt	0.30	mg/L		0.02	E200.8	07/26/17 06:38 / jpv
Lead	ND	mg/L		0.01	E200.8	07/26/17 06:38 / jpv
Lithium	0.06	mg/L	D	0.02	E200.7	07/29/17 01:44 / slf
Mercury	ND	mg/L		0.001	E245.1	07/25/17 13:09 / jh
Molybdenum	ND	mg/L		0.05	E200.7	07/29/17 01:44 / slf
Selenium	ND	mg/L		0.01	E200.8	08/09/17 12:35 / jpv
Thallium	ND	mg/L		0.002	E200.8	07/26/17 06:38 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-007 Client Sample ID: SFL MW-7

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/20/17 11:45

> DateReceived: 07/21/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	664	mg/L		1		E200.7	07/29/17 01:54 / slf
Magnesium	104	mg/L		1		E200.7	07/29/17 01:54 / slf
Potassium	47	mg/L		1		E200.7	07/28/17 05:39 / slf
Sodium	1270	mg/L	D	4		E200.7	07/29/17 01:54 / slf
PHYSICAL PROPERTIES							
рН	6.7	s.u.	Н	0.1		A4500-H B	07/21/17 15:05 / pjw
Solids, Total Dissolved TDS @ 180 C	6640	mg/L	D	100		A2540 C	07/21/17 15:30 / mnh
INORGANICS							
Chloride	2780	mg/L	D	6		E300.0	07/28/17 05:50 / cjm
Sulfate	770	mg/L	D	20		E300.0	07/28/17 05:50 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	07/24/17 10:00 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/26/17 06:40 / jpv
Arsenic	ND	mg/L		0.01		E200.8	07/26/17 06:40 / jpv
Barium	0.04	mg/L		0.01		E200.8	07/26/17 06:40 / jpv
Beryllium	ND	mg/L		0.001		E200.8	07/26/17 06:40 / jpv
Boron	0.83	mg/L		0.05		E200.7	07/29/17 01:54 / slf
Cadmium	ND	mg/L		0.005		E200.8	07/26/17 06:40 / jpv
Chromium	ND	mg/L		0.01		E200.8	07/26/17 06:40 / jpv
Cobalt	ND	mg/L		0.02		E200.8	07/26/17 06:40 / jpv
Lead	ND	mg/L		0.01		E200.8	07/26/17 06:40 / jpv
Lithium	0.43	mg/L	D	0.04		E200.7	07/29/17 01:54 / slf
Mercury	ND	mg/L		0.001		E245.1	07/25/17 13:11 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/31/17 21:37 / rlh
Selenium	ND	mg/L		0.01		E200.8	07/31/17 21:37 / rlh
Thallium	ND	mg/L		0.002		E200.8	07/26/17 06:40 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-009 Client Sample ID: EQBK/SCM/072017

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/20/17 12:25 DateReceived: 07/21/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	07/29/17 02:01 / slf
Magnesium	ND	mg/L		1		E200.7	07/29/17 02:01 / slf
Potassium	ND	mg/L		1		E200.7	07/28/17 05:46 / slf
Sodium	ND	mg/L		1		E200.7	07/29/17 02:01 / slf
PHYSICAL PROPERTIES							
pH	6.1	s.u.	Н	0.1		A4500-H B	07/21/17 15:10 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	07/21/17 15:31 / mnh
INORGANICS							
Chloride	ND	mg/L		1		E300.0	07/28/17 07:08 / cjm
Sulfate	ND	mg/L		1		E300.0	07/28/17 07:08 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	07/24/17 10:13 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/26/17 06:46 / jpv
Arsenic	ND	mg/L		0.01		E200.8	07/26/17 06:46 / jpv
Barium	ND	mg/L		0.01		E200.8	07/26/17 06:46 / jpv
Beryllium	ND	mg/L		0.001		E200.8	07/26/17 06:46 / jpv
Boron	ND	mg/L		0.05		E200.8	07/26/17 06:46 / jpv
Cadmium	ND	mg/L		0.005		E200.8	07/26/17 06:46 / jpv
Chromium	ND	mg/L		0.01		E200.8	07/26/17 06:46 / jpv
Cobalt	ND	mg/L		0.02		E200.8	07/26/17 06:46 / jpv
Lead	ND	mg/L		0.01		E200.8	07/26/17 06:46 / jpv
Lithium	ND	mg/L		0.01		E200.7	07/29/17 02:01 / slf
Mercury	ND	mg/L		0.001		E245.1	07/27/17 12:04 / jh
Molybdenum	ND	mg/L		0.05		E200.7	07/29/17 02:01 / slf
Selenium	ND	mg/L		0.01		E200.8	07/26/17 06:46 / jpv
Thallium	ND	mg/L		0.002		E200.8	07/26/17 06:46 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071798-010

Client Sample ID: Dup-1

Revised Date: 12/21/17 **Report Date:** 08/09/17 Collection Date: 07/19/17 DateReceived: 07/21/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	443	mg/L		1		E200.7	07/29/17 02:05 / slf
Magnesium	71	mg/L		1		E200.7	07/29/17 02:05 / slf
Potassium	40	mg/L		1		E200.7	07/28/17 05:50 / slf
Sodium	743	mg/L	D	4		E200.7	07/29/17 02:05 / slf
PHYSICAL PROPERTIES							
рН	7.0	s.u.	Н	0.1		A4500-H B	07/21/17 15:12 / pjw
Solids, Total Dissolved TDS @ 180 C	4020	mg/L	D	40		A2540 C	07/21/17 15:31 / mnh
INORGANICS							
Chloride	534	mg/L	D	6		E300.0	07/28/17 08:26 / cjm
Sulfate	2100	mg/L	D	20		E300.0	07/28/17 08:26 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	07/24/17 10:28 / bas
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	07/26/17 06:48 / jpv
Arsenic	ND	mg/L		0.01		E200.8	07/26/17 06:48 / jpv
Barium	0.06	mg/L		0.01		E200.8	07/26/17 06:48 / jpv
Beryllium	ND	mg/L		0.001		E200.8	07/26/17 06:48 / jpv
Boron	0.49	mg/L		0.05		E200.8	07/26/17 06:48 / jpv
Cadmium	ND	mg/L		0.005		E200.8	07/26/17 06:48 / jpv
Chromium	ND	mg/L		0.01		E200.8	07/26/17 06:48 / jpv
Cobalt	ND	mg/L		0.02		E200.8	07/26/17 06:48 / jpv
Lead	ND	mg/L		0.01		E200.8	07/26/17 06:48 / jpv
Lithium	0.44	mg/L	D	0.04		E200.7	07/29/17 02:05 / slf
Mercury	ND	mg/L		0.001		E245.1	07/27/17 12:06 / jh
Molybdenum	ND	mg/L		0.05		E200.8	07/31/17 21:44 / rlh
Selenium	ND	mg/L		0.01		E200.8	07/26/17 06:48 / jpv
Thallium	ND	mg/L		0.002		E200.8	07/26/17 06:48 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/03/17Project:CCRRWork Order:B17071798

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batcl	h: 111818
Lab ID: MB-111818	Met	thod Blank				Run: BAL #	SD-15_170721D		07/21/	/17 15:26
Solids, Total Dissolved TDS @ 18	30 C	ND	mg/L	4						
Lab ID: LCS-111818	Lab	oratory Cor	ntrol Sample			Run: BAL #	SD-15_170721D		07/21/	/17 15:26
Solids, Total Dissolved TDS @ 18	30 C	970	mg/L	10	97	90	110			
Lab ID: B17071798-001A DU	P Sar	mple Duplic	ate			Run: BAL #	SD-15_170721D		07/21/	/17 15:29
Solids, Total Dissolved TDS @ 18	30 C	4060	mg/L	40				0.1	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/03/17Project:CCRRWork Order:B17071798

Analyte		Count Re	sult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170724A
Lab ID:	ICV	Initial Ca	alibratio	n Verification Sta	ndard					07/24/	17 09:20
Fluoride			1.02	mg/L	0.10	102	90	110			
Method:	A4500-F C									Batch:	R283639
Lab ID:	MBLK	Method	Blank				Run: MAN-	TECH_170724A		07/24/	17 09:17
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Laborato	ory Fort	ified Blank			Run: MAN-	TECH_170724A		07/24/	17 09:23
Fluoride			1.00	mg/L	0.10	100	90	110			
Lab ID:	B17071782-001AMS	Sample	Matrix	Spike			Run: MAN-	TECH_170724A		07/24/	17 09:28
Fluoride			1.43	mg/L	0.10	100	80	120			
Lab ID:	B17071782-001AMSI	D Sample	Matrix	Spike Duplicate			Run: MAN-	TECH_170724A		07/24/	17 09:30
Fluoride			1.48	mg/L	0.10	105	80	120	3.4	10	
Lab ID:	B17071798-010AMS	Sample	Matrix	Spike			Run: MAN-	TECH_170724A		07/24/	17 10:31
Fluoride			1.11	mg/L	0.10	97	80	120			
Lab ID:	B17071798-010AMSI	D Sample	Matrix	Spike Duplicate			Run: MAN-	TECH_170724A		07/24/	17 10:33
Fluoride			1.12	mg/L	0.10	98	80	120	0.9	10	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/03/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PF	ISC _101-B_	_170721A
Lab ID:	pH 8	Initia	al Calibratio	n Verificat	tion Standard					07/21/	17 08:16
рН			7.98	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R283525
Lab ID:	B17071798-006ADUI	P San	nple Duplica	ate			Run: PHSC	_101-B_1707	21A	07/21/	17 15:02
рН			3.66	s.u.	0.10				0.3	3	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 08/03/17

Project: CCRR

Work Order: B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	1ETROHM 2	_170727A
Lab ID:	ICV	2 Ini	tial Calibratio	on Verification Sta	andard					07/27/	/17 11:39
Chloride			2.15	mg/L	1.0	96	90	110			
Sulfate			8.86	mg/L	1.0	98	90	110			
Method:	E300.0									Batch:	R283970
Lab ID:	ICB	2 Me	ethod Blank				Run: IC ME	TROHM 2_170)727A	07/27/	/17 11:58
Chloride			ND	mg/L	0.03						
Sulfate			ND	mg/L	0.02						
Lab ID:	LFB	2 La	boratory For	tified Blank			Run: IC ME	TROHM 2_170)727A	07/27/	/17 12:18
Chloride			10.2	mg/L	1.0	102	90	110			
Sulfate			30.4	mg/L	1.0	101	90	110			
Lab ID:	B17071779-012AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_170)727A	07/28/	/17 02:55
Chloride			544	mg/L	3.1	107	90	110			
Sulfate			3280	mg/L	9.2	98	90	110			
Lab ID:	B17071779-012AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_170)727A	07/28/	/17 03:15
Chloride			543	mg/L	3.1	107	90	110	0.2	20	
Sulfate			3280	mg/L	9.2	98	90	110	0.0	20	
Lab ID:	B17071798-009AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_170)727A	07/28/	/17 07:28
Chloride			10.9	mg/L	1.0	109	90	110			
Sulfate			32.7	mg/L	1.0	109	90	110			
Lab ID:	B17071798-009AMSI	D 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_170)727A	07/28/	/17 07:47
Chloride			11.0	mg/L	1.0	110	90	110	0.5	20	
Sulfate			32.8	mg/L	1.0	109	90	110	0.4	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Ru	n: ICP203-B	_170727A
Lab ID:	ICV	Co	ntinuing Ca	libration Verific	cation Standa	rd				07/27	/17 09:08
Potassium	ı		25.4	mg/L	1.0	102	95	105			
Method:	E200.7									Batc	h: 111833
Lab ID:	MB-111833	7 Me	thod Blank				Run: ICP20	3-B_170727A		07/28	/17 04:19
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiun	n		ND	mg/L	0.01						
Molybdenu	ım		ND	mg/L	0.007						
Potassium	l		ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-111833	7 La	boratory Co	ntrol Sample			Run: ICP20	3-B_170727A		07/28	/17 04:22
Boron			0.528	mg/L	0.10	106	85	115			
Calcium			28.4	mg/L	1.0	113	85	115			
Lithium			0.558	mg/L	0.10	112	85	115			
Magnesiun	n		28.3	mg/L	1.0	113	85	115			
Molybdenu	ım		0.523	mg/L	0.10	105	85	115			
Potassium	ı		27.8	mg/L	1.0	111	85	115			
Sodium			27.6	mg/L	1.0	110	85	115			
Lab ID:	B17071798-001BMS	3 7 Sa	mple Matrix	Spike			Run: ICP20	3-B_170727A		07/28	/17 05:07
Boron			0.983	mg/L	0.050	105	70	130			
Calcium			470	mg/L	1.0		70	130			Α
Lithium			0.989	mg/L	0.10	108	70	130			
Magnesiun	n		100.0	mg/L	1.0	117	70	130			
Molybdenu	ım		0.527	mg/L	0.071	105	70	130			
Potassium	l		62.3	mg/L	1.0	103	70	130			
Sodium			797	mg/L	4.2		70	130			Α
Lab ID:	B17071798-001BMSI	D 7 Sa	mple Matrix	Spike Duplica	ite		Run: ICP20	3-B_170727A		07/28	/17 05:11
Boron			1.04	mg/L	0.050	117	70	130	5.9	20	
Calcium			477	mg/L	1.0		70	130	1.5	20	Α
Lithium			1.02	mg/L	0.10	114	70	130	3.2	20	
Magnesiun	n		101	mg/L	1.0	123	70	130	1.4	20	
Molybdenu	ım		0.529	mg/L	0.071	106	70	130	0.4	20	
Potassium	1		64.4	mg/L	1.0	111	70	130	3.3	20	
Sodium			812	mg/L	4.2		70	130	1.8	20	Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLi	mit	Qual
Method:	E200.7							Analy	tical Run: ICP20)3-B_	_170728A
Lab ID:	ICV	7 Co	ntinuing Cali	ibration Verificati	ion Standa	rd			0	7/28/	17 09:30
Boron			2.49	mg/L	0.10	100	95	105			
Calcium			24.8	mg/L	1.0	99	95	105			
Lithium			1.24	mg/L	0.10	99	95	105			
Magnesiur	m		24.5	mg/L	1.0	98	95	105			
Molybdenu	um		2.50	mg/L	0.10	100	95	105			
Potassium	1		24.8	mg/L	1.0	99	95	105			
Sodium			24.8	mg/L	1.0	99	95	105			
Method:	E200.7									Batch	n: 111833
Lab ID:	MB-111833	7 Me	thod Blank				Run: ICP20	3-B_170728A	0	7/29/	17 00:34
Boron			ND	mg/L	0.003			_			
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiur	m		0.02	mg/L	0.01						
Molybdenu			ND	mg/L	0.007						
Potassium			ND	mg/L	0.07						
Sodium			0.07	mg/L	0.03						
Lab ID:	LCS-111833	7 Lak	oratory Cor	ntrol Sample			Run: ICP20	3-B_170728A	0	7/29/	17 00:38
Boron			0.503	mg/L	0.10	101	85	_ 115			
Calcium			27.2	mg/L	1.0	109	85	115			
Lithium			0.538	mg/L	0.10	108	85	115			
Magnesiur	m		27.3	mg/L	1.0	109	85	115			
Molybdenu			0.506	mg/L	0.10	101	85	115			
Potassium			27.1	mg/L	1.0	108	85	115			
Sodium			26.7	mg/L	1.0	107	85	115			
Lab ID:	B17071798-001BMS3	3 7 Sai	mple Matrix	Spike			Run: ICP20	3-B_170728A	0	7/29/	17 01:23
Boron			1.03	mg/L	0.050	113	70	130			
Calcium			481	mg/L	1.0		70	130			Α
Lithium			1.01	mg/L	0.10	114	70	130			
Magnesiur	m		101	mg/L	1.0	123	70	130			
Molybdenu			0.526	mg/L	0.071	105	70	130			
Potassium			66.0	mg/L	1.0	118	70	130			
Sodium			793	mg/L	4.2		70	130			Α
Lab ID:	B17071798-001BMSI) 7 Sai	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170728A	0	7/29/	17 01:26
Boron			1.04	mg/L	0.050	115	70	130		20	
Calcium			485	mg/L	1.0		70	130		20	Α
Lithium			1.03	mg/L	0.10	119	70	130		20	
Magnesiur	m		101	mg/L	1.0	121	70	130		20	
Molybdenu			0.518	mg/L	0.071	104	70	130		20	
Potassium			66.2	mg/L	1.0	119	70	130		20	
Sodium			805	mg/L	4.2	113	70	130		20	Α
Joululli			003	mg/L	4.2		10	130	1.0	20	^

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	al Run: I	CPMS202-B_	_170725A
Lab ID:	QCS	11 Initia	l Calibratio	on Verificatio	on Standard					07/26/	17 05:40
Antimony			0.0492	mg/L	0.050	98	90	110			
Arsenic			0.0484	mg/L	0.0050	97	90	110			
Barium			0.0483	mg/L	0.10	97	90	110			
Beryllium			0.0253	mg/L	0.0010	101	90	110			
Boron			0.0524	mg/L	0.10	105	90	110			
Cadmium			0.0257	mg/L	0.0010	103	90	110			
Chromium			0.0529	mg/L	0.010	106	90	110			
Cobalt			0.0513	mg/L	0.010	103	90	110			
Lead			0.0494	mg/L	0.010	99	90	110			
Selenium			0.0486	mg/L	0.0050	97	90	110			
Thallium			0.0488	mg/L	0.10	98	90	110			
Method:	E200.8									Batcl	n: 111833
Lab ID:	MB-111833	12 Meth	od Blank				Run: ICPM	S202-B_170725	A	07/26/	17 06:01
Antimony			ND	mg/L	0.00004						
Arsenic			0.0002	mg/L	0.00006						
Barium			ND	mg/L	0.00004						
Beryllium			ND	mg/L	0.00002						
Boron			ND	mg/L	0.002						
Cadmium			ND	mg/L	0.00002						
Chromium			0.0003	mg/L	0.00009						
Cobalt			ND	mg/L	0.00003						
Lead			0.0001	mg/L	0.00005						
Molybdenu	m		0.0008	mg/L	0.00005						
Selenium			0.0005	mg/L	0.0002						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-111833	12 Labo	ratory Co	ntrol Sample			Run: ICPM	S202-B_170725	Α	07/26/	17 06:06
Antimony			0.541	mg/L	0.0010	108	85	115			
Arsenic			0.561	mg/L	0.0010	112	85	115			
Barium			0.549	mg/L	0.050	110	85	115			
Beryllium			0.272	mg/L	0.0010	109	85	115			
Boron			0.534	mg/L	0.050	107	85	115			
Cadmium			0.278	mg/L	0.0010	111	85	115			
Chromium			0.526	mg/L	0.0050	105	85	115			
Cobalt			0.540	mg/L	0.0050	108	85	115			
Lead			0.550	mg/L	0.0010	110	85	115			
Molybdenu	m		0.530	mg/L	0.0010	106	85	115			
Selenium			0.559	mg/L	0.0010	112	85	115			
Thallium			0.516	mg/L	0.00050	103	85	115			
Lab ID:	B17071798-001BMS3	12 Sam	ple Matrix	Spike			Run: ICPM	S202-B_170725	A	07/26/	17 06:09
Antimony			0.539	mg/L	0.0010	108	70	130			
Arsenic			0.570	mg/L	0.0010	114	70	130			
				-		-	-				

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 111833
Lab ID:	B17071798-001BMS3	3 12 Sa	mple Matrix	Spike			Run: ICPMS	S202-B_170725A		07/26/	17 06:09
Beryllium			0.265	mg/L	0.0010	106	70	130			
Boron			1.01	mg/L	0.050	113	70	130			
Cadmium			0.268	mg/L	0.0010	107	70	130			
Chromium			0.518	mg/L	0.0050	103	70	130			
Cobalt			0.541	mg/L	0.0050	108	70	130			
Lead			0.546	mg/L	0.0010	108	70	130			
Molybdenu	m		0.546	mg/L	0.0010	109	70	130			
Selenium			0.578	mg/L	0.0011	114	70	130			
Thallium			0.459	mg/L	0.00071	92	70	130			
Lab ID:	B17071798-001BMSE) 12 Sa	mple Matrix	Spike Du	olicate		Run: ICPMS	S202-B_170725A		07/26/	17 06:11
Antimony			0.541	mg/L	0.0010	108	70	130	0.5	20	
Arsenic			0.570	mg/L	0.0010	114	70	130	0.1	20	
Barium			0.593	mg/L	0.050	106	70	130	3.6	20	
Beryllium			0.274	mg/L	0.0010	109	70	130	3.2	20	
Boron			1.04	mg/L	0.050	119	70	130	3.2	20	
Cadmium			0.268	mg/L	0.0010	107	70	130	0.1	20	
Chromium			0.520	mg/L	0.0050	103	70	130	0.6	20	
Cobalt			0.544	mg/L	0.0050	109	70	130	0.5	20	
Lead			0.550	mg/L	0.0010	108	70	130	0.5	20	
Molybdenu	m		0.543	mg/L	0.0010	108	70	130	0.6	20	
Selenium			0.565	mg/L	0.0011	112	70	130	2.4	20	
Thallium			0.448	mg/L	0.00071	90	70	130	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytica	l Run: I	CPMS206-B	_170801A
Lab ID:	QCS	2 Initi	al Calibratio	on Verification	on Standard					07/31	/17 16:36
Molybdenu	m		0.0474	mg/L	0.0050	95	90	110			
Selenium			0.0517	mg/L	0.0050	103	90	110			
Method:	E200.8									Batc	h: 111833
Lab ID:	MB-111833	12 Me	thod Blank				Run: ICPM	S206-B_170801	4	07/31	/17 20:53
Antimony			0.0001	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Boron			ND	mg/L	0.003						
Cadmium			0.00005	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			0.00002	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	m		0.00005	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.0001	mg/L	7E-06						
Lab ID:	LCS-111833	12 Lab	oratory Cor	ntrol Sample)		Run: ICPM	S206-B 170801	Α.	07/31	/17 21:00
Antimony			0.512	mg/L	0.0050	102	85	_ 115			
Arsenic			0.544	mg/L	0.0010	109	85	115			
Barium			0.495	mg/L	0.010	99	85	115			
Beryllium			0.229	mg/L	0.0010	92	85	115			
Boron			0.474	mg/L	0.10	95	85	115			
Cadmium			0.275	mg/L	0.0010	110	85	115			
Chromium			0.531	mg/L	0.0010	106	85	115			
Cobalt			0.490	mg/L	0.0010	98	85	115			
Lead			0.506	mg/L	0.0010	101	85	115			
Molybdenu	m		0.477	mg/L	0.0050	95	85	115			
Selenium			0.537	mg/L	0.0050	107	85	115			
Thallium			0.522	mg/L	0.0010	104	85	115			
Lab ID:	B17071798-001BMS3	3 12 Sar	nple Matrix	Spike			Run: ICPM	S206-B_170801	4	07/31	/17 21:03
Antimony			0.508	mg/L	0.0010	102	70	130			
Arsenic			0.532	mg/L	0.0010	106	70	130			
Barium			0.553	mg/L	0.050	99	70	130			
Beryllium			0.222	mg/L	0.0010	89	70	130			
Boron			0.899	mg/L	0.050	97	70	130			
Cadmium			0.253	mg/L	0.0010	101	70	130			
Chromium			0.536	mg/L	0.0050	107	70	130			
Cobalt			0.496	mg/L	0.0050	99	70	130			
Lead			0.506	mg/L	0.0030	100	70	130			
Molybdenu	m		0.476	mg/L	0.0010	95	70	130			
Selenium	···		0.470	mg/L	0.0010	108	70	130			
Thallium			0.490		0.00010	98	70	130			
11141114111			0.490	mg/L	0.00000	90	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 111833
Lab ID:	B17071798-001BMS3	3 12 Sam	nple Matrix	Spike			Run: ICPM	S206-B_170801 <i>A</i>	A	07/31/	/17 21:03
Lab ID:	B17071798-001BMS	D 12 Sam	nple Matrix	Spike Dup	olicate		Run: ICPM	S206-B_170801 <i>A</i>	A	07/31/	/17 21:17
Antimony			0.544	mg/L	0.0010	109	70	130	6.8	20	
Arsenic			0.565	mg/L	0.0010	113	70	130	6.1	20	
Barium			0.607	mg/L	0.050	109	70	130	9.4	20	
Beryllium			0.226	mg/L	0.0010	90	70	130	1.7	20	
Boron			0.873	mg/L	0.050	92	70	130	3.0	20	
Cadmium			0.263	mg/L	0.0010	105	70	130	4.0	20	
Chromium			0.547	mg/L	0.0050	109	70	130	2.1	20	
Cobalt			0.516	mg/L	0.0050	103	70	130	4.0	20	
Lead			0.517	mg/L	0.0010	102	70	130	2.2	20	
Molybdenu	ım		0.510	mg/L	0.0010	102	70	130	7.0	20	
Selenium			0.552	mg/L	0.0010	110	70	130	2.2	20	
Thallium			0.496	mg/L	0.00050	99	70	130	1.2	20	
Method:	E200.8							Analytica	l Run: l	CPMS206-B	_170808 <i>A</i>
Lab ID:	QCS	Initia	al Calibration	on Verifica	tion Standard					08/09/	/17 06:07
Selenium			0.0504	mg/L	0.0050	101	90	110			
Method:	E200.8									Batc	h: 111833
Lab ID:	MB-111833	12 Meth	hod Blank				Run: ICPM	S206-B 170808A	4	08/09/	/17 12:25
Antimony			ND	mg/L	0.00004			_			
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	ım		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Selenium			110	1119/ =	0.0004						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:08/09/17Project:CCRRWork Order:B17071798

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run: l	HGCV202-B	_170725A
Lab ID:	ICV	Initi	al Calibratio	n Verificat	tion Standard					07/25/	/17 09:54
Mercury			0.00198	mg/L	0.00010	99	90	110			
Method:	E245.1									Batc	h: 111889
Lab ID:	MB-111889	Met	thod Blank				Run: HGC\	/202-B_170725A		07/25/	/17 12:26
Mercury			0.00002	mg/L	6E-06						
Lab ID:	LCS-111889	Lab	oratory Cor	itrol Samp	le		Run: HGC\	/202-B_170725A		07/25	/17 12:28
Mercury			0.00207	mg/L	0.00010	103	85	115			
Lab ID:	B17071798-008BMS	Sar	mple Matrix	Spike			Run: HGC\	/202-B_170725A		07/25	/17 13:15
Mercury			0.00196	mg/L	0.00010	97	70	130			
Lab ID:	B17071798-008BMS	D Sar	mple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170725A		07/25	/17 13:17
Mercury			0.00198	mg/L	0.00010	98	70	130	8.0	30	
Method:	E245.1									Batc	h: 111952
Lab ID:	MB-111952	Met	thod Blank				Run: HGC\	/202-B_170727A		07/27	/17 11:57
Mercury			ND	mg/L	6E-06						
Lab ID:	LCS-111952	Lab	oratory Cor	itrol Samp	le		Run: HGC\	/202-B_170727A		07/27	/17 11:59
Mercury			0.00196	mg/L	0.00010	98	85	115			
Lab ID:	B17072043-001CMS	Sar	nple Matrix	Spike			Run: HGC\	/202-B_170727A		07/27	/17 12:23
Mercury			0.00198	mg/L	0.00010	99	70	130			
Lab ID:	B17072043-001CMS	D Sar	mple Matrix	Spike Dup	licate		Run: HGC\	/202-B_170727A		07/27	/17 12:25
Mercury			0.00193	mg/L	0.00010	96	70	130	2.5	30	

Work Order Receipt Checklist

Texas Municipal Power Agency

B17071798

Login completed by:	Gina McCartney		Date	Received: 7/21/2017
Reviewed by:	BL2000\cindy		Re	ceived by: rs4
Reviewed Date:	7/24/2017		Car	rier name: FedEx
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sl	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes ✓	No 🗌	
Chain of custody agrees with	n sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes ✓	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are couch as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all si	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted 🔽
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 4.7°C melted ice, shipping container 2 was 5.2°C on ice and shipping container 3 was 0.7°C on ice.



Chain of Custody & Analytical Request Record

Account Information (billing information)	Report Information (if different then Account Information)	Comments
CompanyiName AMEC toster Wheeler	Company/Name	
Contact Grea Selfer	Contact	Unity CHONGH WATE
Phone 5,3-795-0360	Phone	4
Mailing Address 3755 5, Cap. 10 of Tv. Hw #375	Mailing Address	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Otty, State, Zip Austin, Ty 72 4	City, State, Zip	T continues a
Email greg, sefert @amecfw.com	Email	WALLE TO
Hard Cop	Receive Report □Hard Copy □Email	a BXO Y
Pyrchase Order Quote Quote	Special Report/Formats:	THE STATE OF THE S
Project Information	Matrix Codes Analysis Remosted	
Chent		All tumaround times are
mit, etc. 7665 Manicipal Pare April	W. Water	standard unless marked as RUSH
Sampler Name Samue Mr. On Sampler Phone 512-413-376	Solids	Energy Laboratories
EPA/State Compliance Y Yes	B - Bioassay	₹ .
fred,	Ov Other Dw Ornkhy	C charges and scheduling – Charges –
☐ Byproduct 11 (e)Z material ☐ Unprocessed ore (NOT ground or refined)*	\^\\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	_
Collection	Number of Matrix	THE RELIABILITY OF THE PROPERTY OF THE PROPERT
(Name, Location, Interval, etc.) Date Time		TAT
1 MKW-18	3	02-36-71 TOTIA
2 MW-17	~	700-
3 MWW-16	*	003
4 MMW-11	*	400-
5 EGBK/SCM071917 + 1700	+	500
6 MNW-15 /	1	900-
1W-7	+	7007
8 AP MW-6	<u> </u>	-008
* EQBK/SCM/073017 + 1325	1	600-10
10 Dyp - 1 7-19-17 -	*	010-
Record Milet Schridt Mac A. Signature Signature	Received by (print)	Date/Time Signeture
Religion ished by (orint)	ACMINIAL CONTRACTOR OF THE PROPERTY OF THE PRO	
Care I (Fill)	Received by Laboratory (print)	7/21/17 10:00 strange 1
	A STATE OF THE OWN	
Construction of the control of the c	Y N Y N CC Cash Check	Amount Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

Page 25 of 25

ANALYTICAL SUMMARY REPORT

August 16, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17071805 Quote ID: B3997

Project Name: **CCRR**

Energy Laboratories Inc Billings MT received the following 10 samples for Texas Municipal Power Agency on 7/21/2017 for

anaı	ysıs.
Lab	ID

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17071805-001	MNW-18	07/19/17 12:15 07/21/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17071805-005	EQBK/SCM/071917	07/19/17 17:00 07/21/17	Ground Water	Same As Above
B17071805-006	MNW-15	07/20/17 10:30 07/21/17	Ground Water	Same As Above
B17071805-007	SFL MW-7	07/20/17 11:45 07/21/17	Ground Water	Same As Above
B17071805-009	EQBK/SCM/072017	07/20/17 12:25 07/21/17	Ground Water	Same As Above
B17071805-010	Dup-1	07/19/17 0:00 07/21/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 08/16/17

CLIENT: Texas Municipal Power Agency

Project: CCRR

Work Order: B17071805 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-001

Client Sample ID: MNW-18

Report Date: 08/16/17 Collection Date: 07/19/17 12:15

DateReceived: 07/21/17

Matrix: Ground Water

Analyses	Result Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL						
Radium 226	2.0 pCi/L				E903.0	08/09/17 08:12 / eli-ca
Radium 226 precision (±)	0.45 pCi/L				E903.0	08/09/17 08:12 / eli-ca
Radium 226 MDC	0.13 pCi/L				E903.0	08/09/17 08:12 / eli-ca
Radium 228	3.1 pCi/L				RA-05	08/02/17 14:30 / eli-ca
Radium 228 precision (±)	1.2 pCi/L				RA-05	08/02/17 14:30 / eli-ca
Radium 228 MDC	1.7 pCi/L				RA-05	08/02/17 14:30 / eli-ca
Radium 226 + Radium 228	5.1 pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2 pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	1.7 pCi/L				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-005 Client Sample ID: EQBK/SCM/071917

Report Date: 08/16/17 Collection Date: 07/19/17 17:00

DateReceived: 07/21/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.12	pCi/L	U			E903.0	08/07/17 14:17 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	08/07/17 14:17 / eli-ca
Radium 226 MDC	0.21	pCi/L				E903.0	08/07/17 14:17 / eli-ca
Radium 228	-0.3	pCi/L	U			RA-05	08/02/17 12:51 / eli-ca
Radium 228 precision (±)	0.78	pCi/L				RA-05	08/02/17 12:51 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	08/02/17 12:51 / eli-ca
Radium 226 + Radium 228	-0.2	pCi/L	U			A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-006

Client Sample ID: MNW-15

Report Date: 08/16/17 Collection Date: 07/20/17 10:30

DateReceived: 07/21/17 Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.42	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 228	0.34	pCi/L	U			RA-05	08/02/17 16:12 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	08/02/17 16:12 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	08/02/17 16:12 / eli-ca
Radium 226 + Radium 228	0.8	pCi/L	U			A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	17	nCi/l				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-007 Client Sample ID: SFL MW-7

Report Date: 08/16/17 Collection Date: 07/20/17 11:45 DateReceived: 07/21/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.3	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 precision (±)	0.34	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	08/02/17 16:12 / eli-ca
Radium 228 precision (±)	0.91	pCi/L				RA-05	08/02/17 16:12 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	08/02/17 16:12 / eli-ca
Radium 226 + Radium 228	2.6	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-009 Client Sample ID: EQBK/SCM/072017

Report Date: 08/16/17 Collection Date: 07/20/17 12:25

DateReceived: 07/21/17 Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.13	pCi/L	U			E903.0	08/07/17 13:13 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 228	0.55	pCi/L	U			RA-05	08/02/17 16:11 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	08/02/17 16:11 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	08/02/17 16:11 / eli-ca
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17071805-010

Client Sample ID: Dup-1

Report Date: 08/16/17 Collection Date: 07/19/17

DateReceived: 07/21/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	2.8	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 precision (±)	0.63	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	08/07/17 13:13 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	08/02/17 16:11 / eli-ca
Radium 228 precision (±)	0.94	pCi/L				RA-05	08/02/17 16:11 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	08/02/17 16:11 / eli-ca
Radium 226 + Radium 228	4.1	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	08/09/17 13:32 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 08/15/17 Project: CCRR Work Order: B17071805

Analyte	Result	Units	RL %R	EC	Low Limit H	ligh Limit	RPD	RPDLimit	Qual
Method: E903.0								Batch: RA	226-8575
Lab ID: LCS-RA226-8575	Laboratory Co	ntrol Sample			Run: G542M	170727A		08/07	/17 12:15
Radium 226	11	pCi/L	1	03	80	120			
Lab ID: MB-RA226-8575	Method Blank				Duni CE40M	1707074		00/07	/17 12:15
Lab ID: MB-RA226-8575 Radium 226	0.1	pCi/L			Run: G542M	_170727A		06/07	/1/ 12.15 U
Radium 226 precision (±)	0.1	pCi/L							O
Radium 226 MDC	0.1	pCi/L							
- Tadiani 220 MBO	0.2	po#2							
Method: E903.0								Batch: RA	226-8576
Lab ID: LCS-RA226-8576	Laboratory Co	ntrol Sample			Run: G542M	-2_170727A		08/07	/17 13:13
Radium 226	7.8	pCi/L		77	80	120			S
- LCS response is outside of the acceptance	e range for this anal	ysis. Since the MB, M	S, and MSD ar	e ac	ceptable the bate	ch is approved.			
Lab ID: MB-RA226-8576	Method Blank				Run: G542M	-2_170727A		08/07	/17 13:13
Radium 226	0.07	pCi/L							U
Radium 226 precision (±)	0.1	pCi/L							
Radium 226 MDC	0.2	pCi/L							
Lab ID: B17071805-010AMS	Sample Matrix	Spike			Run: G542M	-2 170727A		08/07	/17 13:13
Radium 226	18	pCi/L		79	70	130			
Lab ID: B17071805-010AMSD	Sample Matrix	Spike Duplicate			Run: G542M	-2 170727A		08/07	/17 13:13
Radium 226	18	pCi/L		79	70	130	0.1	20	
Method: E903.0								Batch: RA	226-8575
Lab ID: MB-RA226-8575	Method Blank				Run: TENNE	LEC-3_170727	'C	08/09	/17 08:12
Radium 226	0.3	pCi/L							
Radium 226 precision (±)	0.1	pCi/L							
Radium 226 MDC	0.1	pCi/L							
Lab ID: B17071805-001AMS	Sample Matrix	Spike			Run: TENNE	LEC-3_170727	'C	08/09	/17 08:12
Radium 226	14	pCi/L		61	70	130			S
- Spike response is outside of the acceptance The batch is approved.		•	al LCS and the				conside	ered to be matri	
Lab ID: B17071805-001AMSD	Sample Matrix	Spike Duplicate			Run: TENNF	LEC-3_170727	'C	08/09	/17 08:12
Radium 226	19	pCi/L		82	70	130	26	20	R
- For all R qualified analytes the RERs are le		•							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:08/15/17Project:CCRRWork Order:B17071805

Analyte	Result Units	RL %REC Low Limit High Limit RPD R	RPDLimit Qual
Method: RA-05			Batch: RA228-5551
Lab ID: LCS-228-RA226-8575	Laboratory Control Sample	Run: TENNELEC-3_170727A	08/02/17 12:51
Radium 228	9.2 pCi/L	89 80 120	
Lab ID: MB-RA226-8575	Method Blank	Run: TENNELEC-3_170727A	08/02/17 12:51
Radium 228	0.4 pCi/L	_	U
Radium 228 precision (±)	0.9 pCi/L		
Radium 228 MDC	1 pCi/L		
Lab ID: B17071805-005AMS	Sample Matrix Spike	Run: TENNELEC-3_170727A	08/02/17 12:51
Radium 228	20 pCi/L	102 70 130	
Lab ID: B17071805-005AMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170727A	08/02/17 12:51
Radium 228	18 pCi/L	94 70 130 8.2	20
Method: RA-05			Batch: RA228-5552
Lab ID: LCS-228-RA226-8576	Laboratory Control Sample	Run: TENNELEC-3_170727B	08/02/17 16:11
Radium 228	10 pCi/L	109 80 120	
Lab ID: MB-RA226-8576	Method Blank	Run: TENNELEC-3_170727B	08/02/17 16:11
Radium 228	-0.7 pCi/L	_	U
Radium 228 precision (±)	1 pCi/L		
Radium 228 MDC	2 pCi/L		
Lab ID: C17070175-001CMS	Sample Matrix Spike	Run: TENNELEC-3_170727B	08/02/17 16:11
Radium 228	19 pCi/L	89 70 130	
Lab ID: C17070175-001CMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170727B	08/02/17 16:11
Radium 228	19 pCi/L	91 70 130 1.1	20
Method: RA-05			Batch: RA228-5561
Lab ID: LCS-228-RA226-8588	Laboratory Control Sample	Run: TENNELEC-3_170808C	08/14/17 15:32
Radium 228	10 pCi/L	101 80 120	
Lab ID: MB-RA226-8588	Method Blank	Run: TENNELEC-3_170808C	08/14/17 15:32
Radium 228	0.3 pCi/L	_	U
Radium 228 precision (±)	0.8 pCi/L		
Radium 228 MDC	1 pCi/L		
Lab ID: C17080003-004CMS	Sample Matrix Spike	Run: TENNELEC-3_170808C	08/14/17 15:32
Radium 228	19 pCi/L	83 70 130	
Lab ID: C17080003-004CMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170808C	08/14/17 15:32
Radium 228	19 pCi/L	86 70 130 4.8	20

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

Texas Municipal Power Agency

B17071805

Login completed by:	Gina McCartney		Date F	Received: 7/21/2017
Reviewed by:	BL2000\cindy		Red	ceived by: rs4
Reviewed Date:	7/24/2017		Carr	ier name: FedEx
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗹	No 🗌	
Chain of custody signed whe	n relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	sample labels?	Yes 🗹	No 🗌	
Samples in proper container/	bottle?	Yes 🗹	No 🗌	
Sample containers intact?		Yes 🗹	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes 🗹	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 4.7°C melted ice, shipping container 2 was 5.2°C on ice and shipping container 3 was 0.7°C on ice.



Wheele,

たんか

AMEX

Company/Name

700

Contact Phone Mailing Address

City, State, Zip

Account Information (Billing information)

Chain of Custody & Analytical Request Record

to 3 aut of to the continues of MNW Comments ☐ EDD/EDT (contact laboratory) ☐ Other Report Information (if different than Account Information) www.energylab.com Mailing Address Company/Name City, State, Zlp Contact Phone

All turnaround times are standard unless marked as RUSH. MUST be contacted prior to RUSH sample submittal for charges and scheduling -See Instructions Page **Energy Laboratories** vork order only Attached **Analysis Requested** Receive Report THard Copy DEmail DIEVELIV DINELAC Special Report/Formats: Matrix Codes V - Vegetation B - Bioassay DW Drinking W- Water S - Soils/ Solids 0 - Other A-Air Email **Tr**Email **%** Sampler Phone 512 - 413 - 3276 ☐ Unprocessed ore (NOT ground or refined)* EPA/State Compliance Bottle Orde amentu.cam exas Municipal MINING CLIENTS, please indicate sample type. MEmail Macon Project Name, PWSiD, Permit, etc. MINING CLIENTS, please indicate ser 8 Receive Invoice Athard Copy Project Information ☐ Byproduct 11 (e)2 material Sampler Name Samue Sample Origin State Purchase Order Email

			` [
Sample Identification	Collection	Number of Ma	9		999	ELILABID	810
(Name, Locadon, Interval, etc.)	Date Time	Containers (See	(See Codes Above)				Use Only
1 - MNW - 18	17-19-17 1315	\ \tau	<u> </u>			BCTD7/805-00) OSSO
2 MW-17	1320	M				L	-002
3 MNW-1	1510	エ					-003
- 1 7/V/V 4	5171	±					7 aO-
5 EGBK/5CM071917	1700	+				-	200-
6 MWW - 15	7-26-17 1030	+					-006
7 SFL MN-7	1145	4					-007
8 AP MW-K	1305	1					-008
9 EQBK/SCM/072017	1325					// /	-009
10 Dyp - 1	7-19-17 -	y	•			>	9/0
Record MUST Somble Macon	Objectine 7 C Sign	Signature Askuru	C. M	Received by (print)	Date/Time Siç	Signature	
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

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Page 16 of 16

ANALYTICAL SUMMARY REPORT

December 15, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17082461

Quote ID: B3997

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 16 samples for Texas Municipal Power Agency on 8/24/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17082461-001	SFL MW-4	08/22/17 17:00 08/24/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved
B17082461-002	SFL MW-3	08/22/17 18:10 08/24/17	Ground Water	Same As Above
B17082461-003	EQBK/SCM/0822	08/22/17 18:50 08/24/17	Ground Water	Same As Above
B17082461-004	AP MW-3	08/22/17 18:45 08/24/17	Ground Water	Same As Above
B17082461-005	MNW-15	08/22/17 17:15 08/24/17	Ground Water	Same As Above
B17082461-006	DUP-1	08/22/17 0:00 08/24/17	Ground Water	Same As Above
B17082461-007	SFL MW-6	08/23/17 9:55 08/24/17	Ground Water	Same As Above
B17082461-008	SFL MW-7	08/23/17 10:00 08/24/17	Ground Water	Same As Above
B17082461-009	SFL MW-5	08/23/17 11:05 08/24/17	Ground Water	Same As Above
B17082461-010	MNW-18	08/23/17 11:49 08/24/17	Ground Water	Same As Above
B17082461-011	SFL MW-2	08/23/17 12:00 08/24/17	Ground Water	Same As Above

B17082461-014	SSP/AP MW-1	08/23/17 15:50 08/24/17	Ground Water Same As Above
B17082461-015	EQBK-BJG-082317	08/23/17 15:25 08/24/17	Ground Water Same As Above
B17082461-016	EQBK/SCM/082317	08/23/17 16:20 08/24/17	Ground Water Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT **800.735.4489** • Casper, WY **888.235.0515** Gillette, WY **866.686.7175** • Helena, MT **877.472.0711**

Revised Date: 12/15/17 **Report Date:** 09/05/17

Project: CCRR Report Date: 09/05/17
Work Order: B17082461 CASE NARRATIVE

Revised Report 12/15/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082461-001 Client Sample ID: SFL MW-4

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/22/17 17:00

DateReceived: 08/24/17

Matrix: Ground Water

Analyses Resul	t l	Units	Qualifiers	ъ.	MCL/ QCL		
			Qualificis	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
	٠.	m a/I		4		E200.7	09/01/17 03:47 / rlh
		mg/L mg/L		1 1		E200.7 E200.7	09/01/17 03:47 / IIII 09/01/17 03:47 / IIIh
<u> </u>		•		-			
Potassium 51		mg/L		1		E200.7	09/01/17 03:47 / rlh
Sodium 973	o r	mg/L	D	4		E200.7	09/01/17 03:47 / rlh
PHYSICAL PROPERTIES							
pH 6.6	3 8	s.u.	Н	0.1		A4500-H B	08/25/17 10:45 / pjw
Solids, Total Dissolved TDS @ 180 C 5900) r	mg/L	D	90		A2540 C	08/25/17 09:34 / rik
INORGANICS							
Chloride 1730) r	mg/L	D	6		E300.0	08/26/17 15:08 / cjm
Sulfate 2240		mg/L	D	20		E300.0	08/26/17 15:08 / cjm
Fluoride 0.1		mg/L		0.1		A4500-F C	08/29/17 11:19 / cjm
METALS, TOTAL RECOVERABLE							
Antimony) r	mg/L		0.006		E200.8	08/29/17 01:03 / jpv
Arsenic NE) r	mg/L		0.01		E200.8	08/29/17 01:03 / jpv
Barium 0.02	2 r	mg/L		0.01		E200.8	08/29/17 01:03 / jpv
Beryllium NE) r	mg/L		0.001		E200.8	08/29/17 01:03 / jpv
· · · · · ·		mg/L		0.05		E200.7	09/01/17 03:47 / rlh
Cadmium) r	mg/L		0.005		E200.8	08/29/17 01:03 / jpv
Chromium) r	mg/L		0.01		E200.8	08/29/17 01:03 / jpv
Cobalt) r	mg/L		0.02		E200.8	08/29/17 01:03 / jpv
Lead) r	mg/L		0.01		E200.8	08/29/17 01:03 / jpv
Lithium 0.34	4 r	mg/L	D	0.04		E200.7	09/01/17 03:47 / rlh
Mercury NE		mg/L		0.001		E245.1	08/25/17 15:49 / jag
Molybdenum NE) r	mg/L		0.05		E200.8	08/29/17 01:03 / jpv
Selenium NE		mg/L		0.01		E200.8	08/29/17 01:03 / jpv
Thallium 0.006	3 r	mg/L		0.002		E200.8	08/30/17 14:00 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082461-002 Client Sample ID: SFL MW-3

Revised Date: 12/15/17 Report Date: 09/05/17 Collection Date: 08/22/17 18:10

DateReceived: 08/24/17 **Matrix:** Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
	507					E000 7	00/04/47 00 50 /
Calcium		mg/L		1		E200.7	09/01/17 03:50 / rlh
Magnesium	108	J.		1		E200.7	09/01/17 03:50 / rlh
Potassium	49	U		1		E200.7	09/01/17 03:50 / rlh
Sodium	785	mg/L	D	4		E200.7	09/01/17 03:50 / rlh
PHYSICAL PROPERTIES							
рН	3.8	s.u.	Н	0.1		A4500-H B	08/25/17 10:55 / pjw
Solids, Total Dissolved TDS @ 180 C	5260	mg/L	D	100		A2540 C	08/25/17 09:34 / rik
INORGANICS							
Chloride	1390	mg/L	D	6		E300.0	08/26/17 16:06 / cjm
Sulfate		mg/L	D	20		E300.0	08/26/17 16:06 / cjm
Fluoride	0.6	mg/L		0.1		A4500-F C	08/29/17 11:35 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:06 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 01:06 / jpv
Barium	0.07	mg/L		0.01		E200.8	08/29/17 01:06 / jpv
Beryllium	0.038	mg/L		0.001		E200.8	08/29/17 01:06 / jpv
Boron	2.64	mg/L		0.05		E200.7	09/01/17 03:50 / rlh
Cadmium	0.008	mg/L		0.005		E200.8	08/29/17 01:06 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:06 / jpv
Cobalt	0.07	mg/L		0.02		E200.8	08/29/17 01:06 / jpv
Lead	0.03	mg/L		0.01		E200.8	08/29/17 01:06 / jpv
Lithium	0.25	mg/L	D	0.04		E200.7	09/01/17 03:50 / rlh
Mercury	0.002	mg/L		0.001		E245.1	08/25/17 15:55 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:06 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:06 / jpv
Thallium	0.007	mg/L		0.002		E200.8	08/30/17 14:02 / jpv

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-003 Client Sample ID: EQBK/SCM/0822

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/22/17 18:50 DateReceived: 08/24/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/01/17 03:54 / rlh
Magnesium	ND	mg/L		1		E200.7	09/01/17 03:54 / rlh
Potassium	ND	mg/L		1		E200.7	09/01/17 03:54 / rlh
odium	ND	mg/L		1		E200.7	09/01/17 03:54 / rlh
HYSICAL PROPERTIES							
Н	6.1	s.u.	Н	0.1		A4500-H B	08/25/17 11:00 / pjw
olids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/25/17 09:34 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	08/26/17 17:05 / cjm
ulfate	ND	mg/L		1		E300.0	08/26/17 17:05 / cjm
luoride	ND	mg/L		0.1		A4500-F C	08/29/17 11:46 / cjm
METALS, TOTAL RECOVERABLE							
ntimony	ND	mg/L		0.006		E200.8	08/29/17 01:10 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 01:10 / jpv
arium	ND	mg/L		0.01		E200.8	08/29/17 01:10 / jpv
eryllium	ND	mg/L		0.001		E200.8	08/29/17 01:10 / jpv
oron	ND	mg/L		0.05		E200.7	09/01/17 03:54 / rlh
admium	ND	mg/L		0.005		E200.8	08/29/17 01:10 / jpv
hromium	ND	mg/L		0.01		E200.8	08/29/17 01:10 / jpv
obalt	ND	mg/L		0.02		E200.8	08/29/17 01:10 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 01:10 / jpv
ithium	ND	mg/L		0.01		E200.7	09/01/17 03:54 / rlh
ercury	ND	mg/L		0.001		E245.1	08/25/17 16:01 / jag
olybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:10 / jpv
elenium	ND	mg/L		0.01		E200.8	08/29/17 01:10 / jpv
hallium	ND	mg/L		0.002		E200.8	08/30/17 14:05 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082461-004 Client Sample ID: AP MW-3

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/22/17 18:45

DateReceived: 08/24/17

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	124	no a/I		4		E200.7	09/01/17 03:58 / rlh
	21	mg/L		1 1		E200.7 E200.7	09/01/17 03:58 / rlh
Magnesium Potassium		J.		=			09/01/17 03:58 / rlh
		mg/L		1		E200.7	
Sodium	233	mg/L		1		E200.7	09/01/17 03:58 / rlh
PHYSICAL PROPERTIES							
рН	5.4	s.u.	Н	0.1		A4500-H B	08/25/17 11:03 / pjw
Solids, Total Dissolved TDS @ 180 C	1360	mg/L	D	20		A2540 C	08/28/17 08:55 / rik
INORGANICS							
Chloride	155	mg/L		1		E300.0	08/26/17 17:24 / cjm
Sulfate	751	_	D	4		E300.0	08/26/17 17:24 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	08/29/17 11:50 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:23 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 01:23 / jpv
Barium	0.02	mg/L		0.01		E200.8	08/29/17 01:23 / jpv
Beryllium	0.003	mg/L		0.001		E200.8	08/29/17 01:23 / jpv
Boron	3.82	mg/L		0.05		E200.7	09/01/17 03:58 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 01:23 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:23 / jpv
Cobalt	0.04	mg/L		0.02		E200.8	08/29/17 01:23 / jpv
Lead	ND	_		0.01		E200.8	08/29/17 01:23 / jpv
Lithium	0.04	mg/L		0.01		E200.7	09/01/17 03:58 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:03 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:23 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:23 / jpv
Thallium	ND	mg/L		0.002		E200.8	08/30/17 14:08 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-005

Client Sample ID: MNW-15

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/22/17 17:15

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	254	mg/L		1		E200.7	09/01/17 04:01 / rlh
Magnesium	48	mg/L		1		E200.7	09/01/17 04:01 / rlh
Potassium	27	mg/L		1		E200.7	09/01/17 04:01 / rlh
odium	424	mg/L	D	2		E200.7	09/01/17 04:01 / rlh
PHYSICAL PROPERTIES							
Н	3.6	s.u.	Н	0.1		A4500-H B	08/25/17 11:06 / pjw
olids, Total Dissolved TDS @ 180 C	2620	mg/L	D	40		A2540 C	08/25/17 09:35 / rik
NORGANICS							
Chloride	718	mg/L	D	3		E300.0	08/26/17 17:44 / cjm
ulfate	1250	mg/L	D	9		E300.0	08/26/17 17:44 / cjm
luoride	0.5	mg/L		0.1		A4500-F C	08/29/17 11:57 / cjm
METALS, TOTAL RECOVERABLE							
ntimony	ND	mg/L		0.006		E200.8	08/29/17 01:27 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 01:27 / jpv
arium	0.02	mg/L		0.01		E200.8	08/29/17 01:27 / jpv
eryllium	0.074	mg/L		0.001		E200.8	08/29/17 01:27 / jpv
oron	9.22	mg/L		0.05		E200.7	09/01/17 04:01 / rlh
admium	0.084	mg/L		0.005		E200.8	08/29/17 01:27 / jpv
chromium	ND	mg/L		0.01		E200.8	08/29/17 01:27 / jpv
Cobalt	0.29	mg/L		0.02		E200.8	08/29/17 01:27 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 01:27 / jpv
ithium	0.05	mg/L	D	0.02		E200.7	09/01/17 04:01 / rlh
lercury	ND	mg/L		0.001		E245.1	08/25/17 16:05 / jag
lolybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:27 / jpv
elenium	ND	mg/L		0.01		E200.8	08/29/17 01:27 / jpv
⁻ hallium	0.002	mg/L		0.002		E200.8	08/30/17 14:10 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-006

Client Sample ID: DUP-1

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/22/17 DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	256	mg/L		1		E200.7	09/01/17 04:05 / rlh
Magnesium	49	mg/L		1		E200.7	09/01/17 04:05 / rlh
Potassium	26	mg/L		1		E200.7	09/01/17 04:05 / rlh
Sodium	419	mg/L	D	2		E200.7	09/01/17 04:05 / rlh
PHYSICAL PROPERTIES							
oH.	3.6	s.u.	Н	0.1		A4500-H B	08/25/17 11:08 / pjw
Solids, Total Dissolved TDS @ 180 C	2640	mg/L	D	40		A2540 C	08/25/17 09:35 / rik
INORGANICS							
Chloride	720	mg/L	D	3		E300.0	08/26/17 18:03 / cjm
Sulfate	1290	mg/L	D	9		E300.0	08/26/17 18:03 / cjm
Fluoride	0.5	mg/L		0.1		A4500-F C	08/29/17 12:04 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:30 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 01:30 / jpv
Barium	0.02	mg/L		0.01		E200.8	08/29/17 01:30 / jpv
Beryllium	0.070	mg/L		0.001		E200.8	08/29/17 01:30 / jpv
Boron	9.12	mg/L		0.05		E200.7	09/01/17 04:05 / rlh
Cadmium	0.084	mg/L		0.005		E200.8	08/29/17 01:30 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:30 / jpv
Cobalt	0.28	mg/L		0.02		E200.8	08/29/17 01:30 / jpv
Lead	ND	mg/L		0.01		E200.8	08/29/17 01:30 / jpv
Lithium	0.04	mg/L	D	0.02		E200.7	09/01/17 04:05 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:06 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:30 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:30 / jpv
Thallium	0.002	mg/L		0.002		E200.8	08/30/17 14:13 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082461-007 Client Sample ID: SFL MW-6

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/23/17 09:55

DateReceived: 08/24/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	864	mg/L	D	2		E200.7	09/01/17 04:08 / rlh
Magnesium	231	Ū	D	1		E200.7	09/01/17 04:08 / rlh
Potassium	71	3		1		E200.7	09/01/17 04:08 / rlh
Sodium		mg/L	D	8		E200.7	09/01/17 04:08 / rlh
PHYSICAL PROPERTIES							
рН	4.0	s.u.	Н	0.1		A4500-H B	08/25/17 11:11 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	90		A2540 C	08/25/17 09:35 / rik
INORGANICS							
Chloride	3730	mg/L	D	10		E300.0	08/26/17 18:23 / cjm
Sulfate	2470	mg/L	D	40		E300.0	08/26/17 18:23 / cjm
Fluoride	0.7	mg/L		0.1		A4500-F C	08/29/17 12:16 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:33 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	08/29/17 01:33 / jpv
Barium	0.04	mg/L		0.01		E200.8	08/29/17 01:33 / jpv
Beryllium	0.056	mg/L		0.001		E200.8	08/29/17 01:33 / jpv
Boron	0.35	mg/L	D	0.07		E200.7	09/01/17 04:08 / rlh
Cadmium	0.012	mg/L		0.005		E200.8	08/29/17 01:33 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:33 / jpv
Cobalt	0.12	mg/L		0.02		E200.8	08/29/17 01:33 / jpv
Lead	ND	mg/L		0.01		E200.8	08/29/17 01:33 / jpv
Lithium	0.56	mg/L	D	0.09		E200.7	09/01/17 04:08 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:08 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:33 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:33 / jpv
Thallium	0.003	mg/L		0.002		E200.8	08/30/17 14:23 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082461-008 Client Sample ID: SFL MW-7

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/23/17 10:00

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	693	mg/L		1		E200.7	09/01/17 04:19 / rlh
Magnesium	108	mg/L		1		E200.7	09/01/17 04:19 / rlh
Potassium	47	mg/L		1		E200.7	09/01/17 04:19 / rlh
Sodium	1260	mg/L	D	4		E200.7	09/01/17 04:19 / rlh
PHYSICAL PROPERTIES							
oH	6.7	s.u.	Н	0.1		A4500-H B	08/25/17 11:13 / pjw
Solids, Total Dissolved TDS @ 180 C	6230	mg/L	D	90		A2540 C	08/25/17 09:35 / rik
NORGANICS							
Chloride	2810	mg/L	D	6		E300.0	08/26/17 18:42 / cjm
Sulfate	801	mg/L	D	20		E300.0	08/26/17 18:42 / cjm
luoride	0.1	mg/L		0.1		A4500-F C	08/29/17 12:19 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:37 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 01:37 / jpv
Barium	0.03	mg/L		0.01		E200.8	08/29/17 01:37 / jpv
eryllium	ND	mg/L		0.001		E200.8	08/29/17 01:37 / jpv
Boron	0.92	mg/L		0.05		E200.7	09/01/17 04:19 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 01:37 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:37 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/29/17 01:37 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 01:37 / jpv
ithium	0.40	mg/L	D	0.04		E200.7	09/01/17 04:19 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:10 / jag
Nolybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:37 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:37 / jpv
⁻ hallium	ND	mg/L		0.002		E200.8	08/30/17 14:26 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082461-009 Client Sample ID: SFL MW-5

Revised Date: 12/15/17 Report Date: 09/05/17 Collection Date: 08/23/17 11:05

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	864	mg/L	D	2		E200.7	09/01/17 04:22 / rlh
Magnesium	170	mg/L		1		E200.7	09/01/17 04:22 / rlh
Potassium	56	mg/L		1		E200.7	09/01/17 04:22 / rlh
Sodium	1650	mg/L	D	8		E200.7	09/01/17 04:22 / rlh
PHYSICAL PROPERTIES							
р Н	4.9	s.u.	Н	0.1		A4500-H B	08/25/17 11:16 / pjw
Solids, Total Dissolved TDS @ 180 C	7520	mg/L	D	100		A2540 C	08/25/17 09:36 / rik
NORGANICS							
Chloride	3190	mg/L	D	10		E300.0	08/26/17 19:02 / cjm
Sulfate	2240	mg/L	D	40		E300.0	08/26/17 19:02 / cjm
Fluoride	0.2	mg/L		0.1		A4500-F C	08/29/17 12:26 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:40 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 01:40 / jpv
Barium	0.02	mg/L		0.01		E200.8	08/29/17 01:40 / jpv
Beryllium	0.010	mg/L		0.001		E200.8	08/29/17 01:40 / jpv
Boron	4.12	mg/L	D	0.07		E200.7	09/01/17 04:22 / rlh
Cadmium	0.006	mg/L		0.005		E200.8	08/29/17 01:40 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:40 / jpv
Cobalt	0.05	mg/L		0.02		E200.8	08/29/17 01:40 / jpv
Lead	ND	mg/L		0.01		E200.8	08/29/17 01:40 / jpv
Lithium	0.62	mg/L	D	0.09		E200.7	09/01/17 04:22 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:12 / jag
Nolybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:40 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:40 / jpv
⁻ hallium	ND	mg/L		0.002		E200.8	08/30/17 14:28 / jpv

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

B. Di :

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-010

Client Sample ID: MNW-18

Revised Date: 12/15/17 **Report Date:** 09/05/17

Collection Date: 08/23/17 11:49 DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	447	mg/L		1		E200.7	09/01/17 04:26 / rlh
Magnesium	71	•		1		E200.7	09/01/17 04:26 / rlh
Potassium	40	mg/L		1		E200.7	09/01/17 04:26 / rlh
Sodium	782	mg/L	D	4		E200.7	09/01/17 04:26 / rlh
PHYSICAL PROPERTIES							
pH	7.0	s.u.	Н	0.1		A4500-H B	08/25/17 11:19 / pjw
Solids, Total Dissolved TDS @ 180 C	3920	mg/L	D	40		A2540 C	08/28/17 08:19 / rik
INORGANICS							
Chloride	529	mg/L	D	6		E300.0	08/26/17 19:21 / cjm
Sulfate	2090	mg/L	D	20		E300.0	08/26/17 19:21 / cjm
Fluoride	0.1	•		0.1		A4500-F C	08/29/17 12:29 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 01:44 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 01:44 / jpv
Barium	0.06	mg/L		0.01		E200.8	08/29/17 01:44 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/29/17 01:44 / jpv
Boron	0.54	mg/L		0.05		E200.7	09/01/17 04:26 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 01:44 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:44 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/29/17 01:44 / jpv
Lead	ND	mg/L		0.01		E200.8	08/29/17 01:44 / jpv
Lithium	0.44	mg/L	D	0.04		E200.7	09/01/17 04:26 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:14 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:44 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 01:44 / jpv
Thallium	ND	mg/L		0.002		E200.8	08/30/17 14:31 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082461-011 Client Sample ID: SFL MW-2

Revised Date: 12/15/17
Report Date: 09/05/17
Collection Date: 08/23/17 12:00
DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	833	mg/L	D	2		E200.7	09/01/17 04:29 / rlh
//agnesium	129	mg/L		1		E200.7	09/01/17 04:29 / rlh
Potassium	48	mg/L		1		E200.7	09/01/17 04:29 / rlh
odium	1510	mg/L	D	8		E200.7	09/01/17 04:29 / rlh
PHYSICAL PROPERTIES							
Н	6.6	s.u.	Н	0.1		A4500-H B	08/25/17 11:21 / pjw
Solids, Total Dissolved TDS @ 180 C	7120	mg/L	D	90		A2540 C	08/28/17 08:19 / rik
NORGANICS							
Chloride	2910	mg/L	D	10		E300.0	08/26/17 19:41 / cjm
ulfate	1890	mg/L	D	40		E300.0	08/26/17 19:41 / cjm
luoride	0.3	mg/L		0.1		A4500-F C	08/29/17 12:44 / cjm
METALS, TOTAL RECOVERABLE							
ntimony	ND	mg/L		0.006		E200.8	08/29/17 01:47 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 01:47 / jpv
arium	0.02	mg/L		0.01		E200.8	08/29/17 01:47 / jpv
eryllium	0.003	mg/L		0.001		E200.8	08/29/17 01:47 / jpv
Boron	0.57	mg/L	D	0.07		E200.7	09/01/17 04:29 / rlh
cadmium	ND	mg/L		0.005		E200.8	08/29/17 01:47 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 01:47 / jpv
Cobalt	0.02	mg/L		0.02		E200.8	08/29/17 01:47 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 01:47 / jpv
ithium	0.33	mg/L	D	0.09		E200.7	09/01/17 04:29 / rlh
1ercury	ND	mg/L		0.001		E245.1	08/25/17 16:17 / jag
lolybdenum	ND	mg/L		0.05		E200.8	08/29/17 01:47 / jpv
elenium	ND	mg/L		0.01		E200.8	08/29/17 01:47 / jpv
⁻ hallium	ND	mg/L		0.002		E200.8	08/30/17 14:34 / jpv

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D. D. :

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-014 Client Sample ID: SSP/AP MW-1

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/23/17 15:50

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	653	mg/L		1		E200.7	09/01/17 04:40 / rlh
Magnesium	158	mg/L		1		E200.7	09/01/17 04:40 / rlh
Potassium	57	mg/L		1		E200.7	09/01/17 04:40 / rlh
Sodium	1370	mg/L	D	4		E200.7	09/01/17 04:40 / rlh
PHYSICAL PROPERTIES							
)H	6.2	s.u.	Н	0.1		A4500-H B	08/25/17 11:32 / pjw
Solids, Total Dissolved TDS @ 180 C	6530	mg/L	D	100		A2540 C	08/28/17 08:20 / rik
NORGANICS							
Chloride	1600	mg/L	D	6		E300.0	08/26/17 21:57 / cjm
ulfate	3070	mg/L	D	20		E300.0	08/26/17 21:57 / cjm
luoride	0.1	mg/L		0.1		A4500-F C	08/29/17 12:57 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 02:07 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 02:07 / jpv
arium	0.05	mg/L		0.01		E200.8	08/29/17 02:07 / jpv
eryllium	0.001	mg/L		0.001		E200.8	08/29/17 02:07 / jpv
soron	0.81	mg/L		0.05		E200.7	09/01/17 04:40 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 02:07 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 02:07 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/29/17 02:07 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 02:07 / jpv
ithium	1.35	mg/L	D	0.04		E200.7	09/01/17 04:40 / rlh
1ercury	ND	mg/L		0.001		E245.1	08/25/17 16:27 / jag
lolybdenum	ND	mg/L		0.05		E200.8	08/29/17 02:07 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 02:07 / jpv
⁻ hallium	ND	mg/L		0.002		E200.8	08/30/17 14:41 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-015 Client Sample ID: EQBK-BJG-082317

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/23/17 15:25

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/01/17 04:44 / rlh
Magnesium	ND	mg/L		1		E200.7	09/01/17 04:44 / rlh
Potassium	ND	mg/L		1		E200.7	09/01/17 04:44 / rlh
Sodium	ND	mg/L		1		E200.7	09/01/17 04:44 / rlh
PHYSICAL PROPERTIES							
H	6.2	s.u.	Н	0.1		A4500-H B	08/25/17 11:34 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/28/17 08:20 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	08/26/17 22:17 / cjm
Sulfate	ND	mg/L		1		E300.0	08/26/17 22:17 / cjm
luoride	ND	mg/L		0.1		A4500-F C	08/29/17 13:07 / cjm
METALS, TOTAL RECOVERABLE							
antimony	ND	mg/L		0.006		E200.8	08/29/17 02:11 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/29/17 02:11 / jpv
arium	ND	mg/L		0.01		E200.8	08/29/17 02:11 / jpv
eryllium	ND	mg/L		0.001		E200.8	08/29/17 02:11 / jpv
Boron	ND	mg/L		0.05		E200.7	09/01/17 04:44 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 02:11 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 02:11 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/29/17 02:11 / jpv
ead	ND	mg/L		0.01		E200.8	08/29/17 02:11 / jpv
ithium	ND	mg/L		0.01		E200.7	09/01/17 04:44 / rlh
1ercury	ND	mg/L		0.001		E245.1	08/25/17 16:29 / jag
lolybdenum	ND	mg/L		0.05		E200.8	08/29/17 02:11 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 02:11 / jpv
-hallium	ND	mg/L		0.002		E200.8	08/30/17 14:44 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

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Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082461-016 Client Sample ID: EQBK/SCM/082317

Revised Date: 12/15/17 **Report Date:** 09/05/17 Collection Date: 08/23/17 16:20

DateReceived: 08/24/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/01/17 04:47 / rlh
Magnesium	ND	mg/L		1		E200.7	09/01/17 04:47 / rlh
Potassium	ND	mg/L		1		E200.7	09/01/17 04:47 / rlh
Sodium	ND	mg/L		1		E200.7	09/01/17 04:47 / rlh
PHYSICAL PROPERTIES							
рН	5.8	s.u.	Н	0.1		A4500-H B	08/25/17 11:37 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/28/17 08:21 / rik
INORGANICS							
Chloride	ND	mg/L		1		E300.0	08/26/17 22:36 / cjm
Sulfate	ND	mg/L		1		E300.0	08/26/17 22:36 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	08/29/17 13:14 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/29/17 02:14 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/29/17 02:14 / jpv
Barium	ND	mg/L		0.01		E200.8	08/29/17 02:14 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/29/17 02:14 / jpv
Boron	ND	mg/L		0.05		E200.7	09/01/17 04:47 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/29/17 02:14 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/29/17 02:14 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/29/17 02:14 / jpv
Lead	ND	mg/L		0.01		E200.8	08/29/17 02:14 / jpv
Lithium	ND	mg/L		0.01		E200.7	09/01/17 04:47 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/25/17 16:31 / jag
Molybdenum	ND	mg/L		0.05		E200.8	08/29/17 02:14 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/29/17 02:14 / jpv
Thallium	ND	mg/L		0.002		E200.8	08/30/17 14:47 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte Cou	nt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch	n: 113036
Lab ID: LCS-113036	Laboratory Con	ntrol Sample			Run: BAL #	SD-15_170825D		08/25/	17 09:30
Solids, Total Dissolved TDS @ 180 C	983	mg/L	10	97	90	110			
Lab ID: B17082448-002A DUP	Sample Duplica	ate			Run: BAL #	SD-15_170825D		08/25/	17 09:33
Solids, Total Dissolved TDS @ 180 C	782	mg/L	10				0.6	5	
Lab ID: MB-113036	Method Blank				Run: BAL #	SD-15_170825D		08/28/	17 08:48
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	4						
Method: A2540 C								Batch	n: 113070
Lab ID: MB-113070	Method Blank				Run: BAL #	SD-15_170828C		08/28/	17 08:16
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	4						
Lab ID: LCS-113070	Laboratory Con	ntrol Sample			Run: BAL #	SD-15_170828C		08/28/	17 08:17
Solids, Total Dissolved TDS @ 180 C	987	mg/L	10	99	90	110			
Lab ID: B17082598-003A DUP	Sample Duplica	ate			Run: BAL #	SD-15_170828C		08/28/	17 08:18
Solids, Total Dissolved TDS @ 180 C	6410	mg/L	98				0.5	5	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170829A
Lab ID:	ICV	Initia	al Calibratio	on Verification St	andard					08/29/	17 10:16
Fluoride			0.950	mg/L	0.10	95	90	110			
Method:	A4500-F C									Batch:	R285788
Lab ID:	MBLK	Meth	nod Blank				Run: MAN-	TECH_170829A		08/29/	17 10:13
Fluoride			0.02	mg/L	0.02						
Lab ID:	B17082461-001AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170829A		08/29/	17 11:21
Fluoride			1.05	mg/L	0.10	95	80	120			
Lab ID:	B17082461-001AMSI	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170829A		08/29/	17 11:24
Fluoride			1.07	mg/L	0.10	97	80	120	1.9	10	
Lab ID:	B17082461-011AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170829A		08/29/	17 12:46
Fluoride			1.20	mg/L	0.10	93	80	120			
Lab ID:	B17082461-011AMSI	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170829A		08/29/	17 12:49
Fluoride			1.23	mg/L	0.10	96	80	120	2.5	10	
Lab ID:	LFB	Labo	oratory For	tified Blank			Run: MAN-	TECH_170829A		08/29/	17 17:01
Fluoride			0.920	mg/L	0.10	92	90	110			

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytica	al Run: Pl	HSC _101-B_	_170825A
Lab ID:	pH 8	Initi	al Calibratio	n Verifica	ation Standard					08/25/	/17 08:12
рН			7.98	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R285537
Lab ID:	B17082461-002ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17082	25A	08/25/	/17 10:58
рН			3.83	s.u.	0.10				0.3	3	
Lab ID:	B17082461-012ADUF	P Sar	nple Duplica	ate			Run: PHSC	_101-B_17082	25A	08/25/	/17 11:26
рН			7.26	s.u.	0.10				0.3	3	

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 09/05/17

Work Order: B17082461

Project: CCRR

Analyte Count Result Units **RL %REC Low Limit High Limit RPD RPDLimit** E300.0 Analytical Run: IC METROHM 1 170825A Method: Lab ID: ICV 2 Initial Calibration Verification Standard 08/25/17 16:04 Chloride 2.22 mg/L 99 90 110 101 Sulfate 9.08 mg/L 1.0 90 110 Batch: R285660 Method: E300.0 Lab ID: **ICB** 2 Method Blank Run: IC METROHM 1 170825A 08/25/17 16:23 Chloride ND mg/L 0.006 Sulfate ND 0.02 mg/L Lab ID: LFB 2 Laboratory Fortified Blank Run: IC METROHM 1 170825A 08/25/17 16:43 Chloride 10.1 mg/L 1.0 101 90 110 Sulfate 30.1 90 mg/L 1.0 100 110 Lab ID: B17082461-002AMS 2 Sample Matrix Spike Run: IC METROHM 1 170825A 08/26/17 16:26 Chloride 2430 mg/L 6 1 104 90 110 Sulfate 5500 mg/L 18 106 90 110 Lab ID: B17082461-002AMSD 2 Sample Matrix Spike Duplicate Run: IC METROHM 1 170825A 08/26/17 16:45 Chloride 2410 ma/L 6.1 103 90 110 0.7 20 5470 90 20 Sulfate mg/L 18 105 110 0.7 B17082461-012AMS Lab ID: 2 Sample Matrix Spike Run: IC METROHM 1 170825A 08/26/17 20:59 3140 mg/L 6.1 90 110 Ε Chloride 99 Sulfate 4140 90 110 mg/L 18 108 Lab ID: B17082461-012AMSD 2 Sample Matrix Spike Duplicate 08/26/17 21:18 Run: IC METROHM 1_170825A Chloride 3130 6.1 98 90 110 20 Ε mg/L 20 Sulfate 4140 90 0.1 mg/L 18 108 110 Method: E300.0 Analytical Run: IC METROHM 1 170829A Lab ID: ICV Initial Calibration Verification Standard 08/29/17 15:29 Chloride 2.21 mg/L 98 90 110 Method: E300.0 Batch: R285818 Lab ID: **ICB** Method Blank Run: IC METROHM 1 170829A 08/29/17 15:49 Chloride ND mg/L 0.006 Lab ID: Laboratory Fortified Blank LFB Run: IC METROHM 1 170829A 08/29/17 16:08 Chloride 10.2 mg/L 1.0 102 90 110 Lab ID: B17081933-011AMS Sample Matrix Spike Run: IC METROHM 1 170829A 08/29/17 17:06 Chloride 6160 mg/L 31 107 90 110 Lab ID: B17081933-011AMSD Sample Matrix Spike Duplicate Run: IC METROHM 1 170829A 08/29/17 17:26 Chloride 6150 mg/L 31 107 90 110 0.0 20

Qualifiers:

RL - Analyte reporting limit.

E - Estimated value. Result exceeds the instrument upper quantitation limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD F	RPDLimit	Qual
Method:	E200.7							Anal	ytical Run:	ICP203-B_	_170831
Lab ID:	ICV	6 Co	ntinuing Cal	ibration Verific	ation Standa	rd				08/31/	/17 11:49
Boron			2.50	mg/L	0.10	100	95	105			
Calcium			25.0	mg/L	1.0	100	95	105			
Lithium			1.27	mg/L	0.10	101	95	105			
Magnesiur	m		24.9	mg/L	1.0	99	95	105			
Potassium	1		25.8	mg/L	1.0	103	95	105			
Sodium			25.6	mg/L	1.0	103	95	105			
Method:	E200.7									Batcl	h: 113004
Lab ID:	MB-113004	6 Me	thod Blank				Run: ICP20	3-B_170831A		09/01/	/17 03:08
Boron			ND	mg/L	0.003						
Calcium			0.2	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiur	m		ND	mg/L	0.01						
Potassium	1		ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-113004	6 Lat	ooratory Cor	ntrol Sample			Run: ICP20	3-B_170831A		09/01/	/17 03:12
Boron			0.452	mg/L	0.10	90	85	115			
Calcium			24.2	mg/L	1.0	96	85	115			
Lithium			0.468	mg/L	0.10	94	85	115			
Magnesiur	m		24.2	mg/L	1.0	97	85	115			
Potassium	1		24.1	mg/L	1.0	96	85	115			
Sodium			24.2	mg/L	1.0	97	85	115			
Lab ID:	B17082448-001CMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_170831A		09/01/	/17 03:26
Boron			0.686	mg/L	0.050	101	70	130			
Calcium			104	mg/L	1.0	98	70	130			
Lithium			0.506	mg/L	0.10	98	70	130			
Magnesiur	m		77.0	mg/L	1.0	99	70	130			
Potassium	1		29.5	mg/L	1.0	98	70	130			
Sodium			105	mg/L	1.0	96	70	130			
Lab ID:	B17082448-001CMSE	6 Sa	mple Matrix	Spike Duplica	ite		Run: ICP20	3-B_170831A		09/01/	/17 03:36
Boron			0.688	mg/L	0.050	102	70	130	0.4	20	
Calcium			105	mg/L	1.0	101	70	130	0.7	20	
Lithium			0.514	mg/L	0.10	99	70	130	1.5	20	
Magnesiur	m		77.3	mg/L	1.0	100	70	130	0.4	20	
Potassium	1		29.7	mg/L	1.0	99	70	130	0.6	20	
Sodium			107	mg/L	1.0	101	70	130	1.3	20	
Lab ID:	B17082461-016BMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_170831A		09/01/	/17 05:05
Boron			0.496	mg/L	0.050	99	70	130			
Calcium			26.6	mg/L	1.0	105	70	130			
Lithium			0.516	mg/L	0.10	103	70	130			
Littinaiii				mg/L			70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 113004
Lab ID:	B17082461-016BMS3	6 S	ample Matrix	Spike			Run: ICP20	3-B_170831A		09/01/	17 05:05
Potassium			26.8	mg/L	1.0	107	70	130			
Sodium			26.5	mg/L	1.0	104	70	130			
Lab ID:	B17082461-016BMSI	0 6 S	ample Matrix	Spike Duplica	te		Run: ICP20	3-B_170831A		09/01/	17 05:08
Boron			0.484	mg/L	0.050	97	70	130	2.5	20	
Calcium			25.5	mg/L	1.0	101	70	130	4.0	20	
Lithium			0.504	mg/L	0.10	101	70	130	2.3	20	
Magnesium	ı		25.5	mg/L	1.0	102	70	130	2.3	20	
Potassium			26.0	mg/L	1.0	103	70	130	3.1	20	
Sodium			25.7	mg/L	1.0	101	70	130	3.1	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS202-B_	_170830A
Lab ID:	QCS		Initial Calibration	n Verificatio	on Standard					08/30/	17 13:06
Thallium			0.0491	mg/L	0.10	98	90	110			
Method:	E200.8									Batcl	h: 113004
Lab ID:	MB-113004	11	Method Blank				Run: ICPM	S202-B_170830A		08/30/	17 13:37
Antimony			0.00007	mg/L	0.00004						
Arsenic			0.0002	mg/L	0.00006						
Barium			ND	mg/L	0.00004						
Beryllium			ND	mg/L	0.00002						
Cadmium			ND	mg/L	0.00002						
Chromium			0.0003	mg/L	0.00009						
Cobalt			ND	mg/L	0.00003						
Lead			0.00009	mg/L	0.00005						
Molybdenu	m		0.006	mg/L	0.00005						
Selenium			ND	mg/L	0.0002						
Thallium			ND	mg/L	0.0001						
Lab ID:	LCS-113004	11	Laboratory Cor	trol Sample)		Run: ICPMS	S202-B_170830A		08/30/	17 13:50
Antimony			0.573	mg/L	0.0050	115	85	115			
Arsenic			0.522	mg/L	0.0010	104	85	115			
Barium			0.525	mg/L	0.010	105	85	115			
Beryllium			0.255	mg/L	0.0010	102	85	115			
Cadmium			0.265	mg/L	0.0010	106	85	115			
Chromium			0.494	mg/L	0.0010	99	85	115			
Cobalt			0.490	mg/L	0.0010	98	85	115			
Lead			0.430	mg/L	0.0010	107	85	115			
	m		0.537	-	0.0010	107	85	115			
Molybdenu Selenium	III		0.512	mg/L	0.0050	100	85	115			
Thallium			0.512	mg/L mg/L	0.0030	102	85	115			
Lab ID:	B17082448-001CMS3	R 11	Sample Matrix	-			Run: ICPM	S202-B_170830A		08/30/	17 13:52
Antimony			0.541	mg/L	0.0010	108	70	130		00/00/	17 10.02
Arsenic			0.530	mg/L	0.0010	106	70	130			
Barium			0.593	mg/L	0.050	106	70	130			
Beryllium			0.247	mg/L	0.0010	99	70	130			
Cadmium			0.258	mg/L	0.0010	103	70	130			
Chromium			0.500	mg/L	0.0010	100	70	130			
Cobalt			0.493		0.0050	99		130			
				mg/L			70 70				
Lead	-		0.542	mg/L	0.0010	108	70 70	130			
Molybdenu	III		0.526	mg/L	0.0010	104	70 70	130			
Selenium Thallium			0.505 0.510	mg/L mg/L	0.0010 0.00050	101 102	70 70	130 130			
	D17002440 004CF4CF) 11								00/20	117 12:55
Lab ID:	B17082448-001CMSE	۱۱ ر	•			400		S202-B_170830A			17 13:55
Antimony			0.532	mg/L	0.0010	106	70	130	1.8	20	
Arsenic			0.531	mg/L	0.0010	106	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	n: 113004
Lab ID:	B17082448-001CMSE	11 Sa	mple Matrix	Spike Dupl	icate		Run: ICPM	S202-B_170830	Α	08/30/	17 13:55
Barium			0.597	mg/L	0.050	107	70	130	0.6	20	
Beryllium			0.250	mg/L	0.0010	100	70	130	1.4	20	
Cadmium			0.258	mg/L	0.0010	103	70	130	0.0	20	
Chromium			0.496	mg/L	0.0050	99	70	130	0.8	20	
Cobalt			0.492	mg/L	0.0050	98	70	130	0.2	20	
Lead			0.553	mg/L	0.0010	110	70	130	1.9	20	
Molybdenu	m		0.520	mg/L	0.0010	103	70	130	1.1	20	
Selenium			0.505	mg/L	0.0010	101	70	130	0.0	20	
Thallium			0.515	mg/L	0.00050	103	70	130	0.9	20	
Lab ID:	B17082461-016BMS3	11 Sa	mple Matrix	Spike			Run: ICPM	S202-B_170830	Α	08/30/	17 14:57
Antimony			0.549	mg/L	0.0010	110	70	130			
Arsenic			0.532	mg/L	0.0010	106	70	130			
Barium			0.572	mg/L	0.050	114	70	130			
Beryllium			0.263	mg/L	0.0010	105	70	130			
Cadmium			0.274	mg/L	0.0010	110	70	130			
Chromium			0.498	mg/L	0.0050	99	70	130			
Cobalt			0.505	mg/L	0.0050	101	70	130			
Lead			0.553	mg/L	0.0010	111	70	130			
Molybdenu	m		0.503	mg/L	0.0010	101	70	130			
Selenium			0.519	mg/L	0.0010	104	70	130			
Thallium			0.529	mg/L	0.00050	106	70	130			
Lab ID:	B17082461-016BMSE) 11 Sa	mple Matrix	Spike Dup	icate		Run: ICPM	S202-B_170830	Α	08/30/	17 14:59
Antimony			0.555	mg/L	0.0010	111	70	130	1.1	20	
Arsenic			0.532	mg/L	0.0010	106	70	130	0.0	20	
Barium			0.558	mg/L	0.050	111	70	130	2.5	20	
Beryllium			0.260	mg/L	0.0010	104	70	130	1.0	20	
Cadmium			0.274	mg/L	0.0010	110	70	130	0.0	20	
Chromium			0.504	mg/L	0.0050	101	70	130	1.3	20	
Cobalt			0.501	mg/L	0.0050	100	70	130	8.0	20	
Lead			0.551	mg/L	0.0010	110	70	130	0.4	20	
Molybdenu	m		0.514	mg/L	0.0010	103	70	130	2.2	20	
Selenium			0.520	mg/L	0.0010	104	70	130	0.4	20	
Thallium			0.527	mg/L	0.00050	105	70	130	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count Resu	lt Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	Run: I	CPMS206-B_	_170828A
Lab ID:	QCS	10 Initial Calib	ration Verificat	ion Standard					08/28/	17 23:35
Antimony		0.049	8 mg/L	0.050	100	90	110			
Arsenic		0.052	0 mg/L	0.0050	104	90	110			
Barium		0.049	1 mg/L	0.10	98	90	110			
Beryllium		0.026	8 mg/L	0.0010	107	90	110			
Cadmium		0.026	5 mg/L	0.0010	106	90	110			
Chromium		0.053	8 mg/L	0.010	108	90	110			
Cobalt		0.051	0 mg/L	0.010	102	90	110			
Lead		0.049	0 mg/L	0.010	98	90	110			
Molybdenu	um	0.047	1 mg/L	0.0050	94	90	110			
Selenium		0.051	5 mg/L	0.0050	103	90	110			
Method:	E200.8								Batch	n: 113004
Lab ID:	MB-113004	11 Method Bla	nk			Run: ICPM	S206-B_170828 <i>A</i>	١	08/29/	17 00:43
Antimony		0.0000	9 mg/L	0.00004						
Arsenic		N	D mg/L	0.0002						
Barium		N	D mg/L	0.00005						
Beryllium		N	D mg/L	0.00008						
Cadmium		N	D mg/L	0.00003						
Chromium		N	D mg/L	0.0001						
Cobalt		0.0000	2 mg/L	0.00002						
Lead		N	D mg/L	0.00003						
Molybdenu	um	N	D mg/L	0.00003						
Selenium		N	D mg/L	0.0004						
Thallium		0.0000	8 mg/L	7E-06						
Lab ID:	LCS-113004	11 Laboratory	Control Samp	le		Run: ICPM	S206-B_170828 <i>A</i>	١	08/29/	17 00:49
Antimony		0.57	1 mg/L	0.0050	114	85	115			
Arsenic		0.52	4 mg/L	0.0010	105	85	115			
Barium		0.50	9 mg/L	0.010	102	85	115			
Beryllium		0.25	5 mg/L	0.0010	102	85	115			
Cadmium		0.26	3 mg/L	0.0010	105	85	115			
Chromium		0.52	4 mg/L	0.0010	105	85	115			
Cobalt		0.52	5 mg/L	0.0010	105	85	115			
Lead		0.51	5 mg/L	0.0010	103	85	115			
Molybdenu	um	0.51	6 mg/L	0.0050	103	85	115			
Selenium		0.52	8 mg/L	0.0050	106	85	115			
Thallium		0.56	1 mg/L	0.0010	112	85	115			
Lab ID:	B17082448-001CMS3	11 Sample Ma	trix Spike			Run: ICPM	S206-B_170828 <i>A</i>		08/29/	17 00:53
Antimony		0.53	1 mg/L	0.0010	106	70	130			
Arsenic		0.54	-	0.0010	108	70	130			
Barium		0.57	•	0.050	103	70	130			
Beryllium		0.24	•	0.0010	97	70	130			
Cadmium		0.26	•	0.0010	106	70	130			
Chromium		0.52	•	0.0050	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 113004
Lab ID:	B17082448-001CMS3	11 Sar	nple Matrix	Spike			Run: ICPM	S206-B_170828	A	08/29	/17 00:53
Cobalt			0.517	mg/L	0.0050	103	70	130			
Lead			0.510	mg/L	0.0010	102	70	130			
Molybdenu	ım		0.495	mg/L	0.0010	98	70	130			
Selenium			0.532	mg/L	0.0010	106	70	130			
Thallium			0.512	mg/L	0.00050	102	70	130			
Lab ID:	B17082448-001CMSE) 11 Sar	nple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_170828	A	08/29	/17 00:56
Antimony			0.538	mg/L	0.0010	108	70	130	1.3	20	
Arsenic			0.541	mg/L	0.0010	108	70	130	0.0	20	
Barium			0.580	mg/L	0.050	104	70	130	1.0	20	
Beryllium			0.252	mg/L	0.0010	101	70	130	3.9	20	
Cadmium			0.266	mg/L	0.0010	106	70	130	0.5	20	
Chromium			0.524	mg/L	0.0050	105	70	130	0.5	20	
Cobalt			0.520	mg/L	0.0050	104	70	130	0.6	20	
Lead			0.508	mg/L	0.0010	101	70	130	0.4	20	
Molybdenu	ım		0.505	mg/L	0.0010	100	70	130	2.0	20	
Selenium			0.535	mg/L	0.0010	107	70	130	0.5	20	
Thallium			0.510	mg/L	0.00050	102	70	130	0.4	20	
Lab ID:	B17082461-016BMS3	11 Sar	nple Matrix	Spike			Run: ICPM	S206-B_170828	A	08/29	/17 02:18
Antimony			0.528	mg/L	0.0010	106	70	130			
Arsenic			0.531	mg/L	0.0010	106	70	130			
Barium			0.520	mg/L	0.050	104	70	130			
Beryllium			0.247	mg/L	0.0010	99	70	130			
Cadmium			0.267	mg/L	0.0010	107	70	130			
Chromium			0.530	mg/L	0.0050	106	70	130			
Cobalt			0.536	mg/L	0.0050	107	70	130			
Lead			0.520	mg/L	0.0010	104	70	130			
Molybdenu	ım		0.474	mg/L	0.0010	95	70	130			
Selenium			0.534	mg/L	0.0010	107	70	130			
Thallium			0.579	mg/L	0.00050	116	70	130			
Lab ID:	B17082461-016BMSD) 11 Sar	nple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_170828/	A	08/29	/17 02:21
Antimony			0.540	mg/L	0.0010	108	70	130	2.3	20	
Arsenic			0.523	mg/L	0.0010	105	70	130	1.5	20	
Barium			0.517	mg/L	0.050	103	70	130	0.5	20	
Beryllium			0.253	mg/L	0.0010	101	70	130	2.5	20	
Cadmium			0.266	mg/L	0.0010	106	70	130	0.3	20	
Chromium			0.536	mg/L	0.0050	107	70	130	1.1	20	
Cobalt			0.532	mg/L	0.0050	106	70	130	0.7	20	
Lead			0.520	mg/L	0.0010	104	70	130	0.0	20	
Molybdenu	ım		0.492	mg/L	0.0010	98	70	130	3.8	20	
Selenium			0.523	mg/L	0.0010	105	70	130	2.1	20	
Thallium			0.576	mg/L	0.00050	115	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	: 113004
Lab ID:	B17082448-001CMS3	11 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170829A		08/29/	17 23:54
Antimony			0.541	mg/L	0.0010	108	70	130			
Arsenic			0.533	mg/L	0.0010	106	70	130			
Barium			0.578	mg/L	0.050	103	70	130			
Beryllium			0.238	mg/L	0.0010	95	70	130			
Cadmium			0.258	mg/L	0.0010	103	70	130			
Chromium			0.508	mg/L	0.0050	101	70	130			
Cobalt			0.565	mg/L	0.0050	113	70	130			
Lead			0.524	mg/L	0.0010	105	70	130			
Molybdenu	m		0.510	mg/L	0.0010	101	70	130			
Selenium			0.509	mg/L	0.0010	101	70	130			
Thallium			0.512	mg/L	0.00050	102	70	130			
Lab ID:	B17082448-001CMSE) 11 Sar	mple Matrix	Spike Dupli	cate		Run: ICPM	S206-B_170829A		08/29/ ⁻	17 23:57
Antimony			0.545	mg/L	0.0010	109	70	130	8.0	20	
Arsenic			0.532	mg/L	0.0010	106	70	130	0.2	20	
Barium			0.585	mg/L	0.050	105	70	130	1.2	20	
Beryllium			0.243	mg/L	0.0010	97	70	130	2.4	20	
Cadmium			0.257	mg/L	0.0010	103	70	130	0.1	20	
Chromium			0.508	mg/L	0.0050	101	70	130	0.1	20	
Cobalt			0.545	mg/L	0.0050	109	70	130	3.5	20	
Lead			0.521	mg/L	0.0010	104	70	130	0.6	20	
Molybdenu	m		0.511	mg/L	0.0010	101	70	130	0.1	20	
Selenium			0.506	mg/L	0.0010	101	70	130	0.7	20	
Thallium			0.498	mg/L	0.00050	100	70	130	2.7	20	
Lab ID:	B17082461-016BMS3	3 11 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170829A		08/30/	17 01:19
Antimony			0.542	mg/L	0.0010	108	70	130			
Arsenic			0.535	mg/L	0.0010	107	70	130			
Barium			0.544	mg/L	0.050	109	70	130			
Beryllium			0.255	mg/L	0.0010	102	70	130			
Cadmium			0.269	mg/L	0.0010	108	70	130			
Chromium			0.530	mg/L	0.0050	106	70	130			
Cobalt			0.590	mg/L	0.0050	118	70	130			
Lead			0.526	mg/L	0.0010	105	70	130			
Molybdenu	m		0.498	mg/L	0.0010	100	70	130			
Selenium			0.521	mg/L	0.0010	104	70	130			
Thallium			0.667	mg/L	0.00050	133	70	130			S
Lab ID:	B17082461-016BMSE) 11 Sar						S206-B_170829A			17 01:22
Antimony			0.572	mg/L	0.0010	114	70	130	5.3	20	
Arsenic			0.480	mg/L	0.0010	96	70	130	11	20	
Barium			0.554	mg/L	0.050	111	70	130	1.8	20	
Beryllium			0.258	mg/L	0.0010	103	70	130	1.1	20	
Cadmium			0.239	mg/L	0.0010	96	70	130	12	20	
Chromium			0.472	mg/L	0.0050	94	70	130	11	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 113004
Lab ID:	B17082461-016BMS	D 11 Sam	ple Matrix	Spike Duplicate			Run: ICPM	S206-B_170829A		08/30/	17 01:22
Cobalt			0.588	mg/L	0.0050	118	70	130	0.3	20	
Lead			0.546	mg/L	0.0010	109	70	130	3.7	20	
Molybdenu	m		0.526	mg/L	0.0010	105	70	130	5.4	20	
Selenium			0.506	mg/L	0.0010	101	70	130	3.0	20	
Thallium			0.677	mg/L	0.00050	135	70	130	1.4	20	S

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/05/17Project:CCRRWork Order:B17082461

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	al Run:	HGCV202-B_	_170825A
Lab ID:	ICV	Initia	l Calibratio	n Verificati	on Standard					08/25/	17 14:51
Mercury		(0.00182	mg/L	0.00010	91	90	110			
Method:	E245.1									Batcl	h: 113011
Lab ID:	MB-113011	Meth	od Blank				Run: HGC\	/202-B_170825A		08/25/	17 15:46
Mercury			ND	mg/L	1E-06						
Lab ID:	LCS-113011	Labo	ratory Con	trol Sample	e		Run: HGC\	/202-B_170825A		08/25/	17 15:48
Mercury		(0.00186	mg/L	0.00010	93	85	115			
Lab ID:	B17082461-001BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170825A		08/25/	17 15:51
Mercury		(0.00179	mg/L	0.00010	89	70	130			
Lab ID:	B17082461-001BMS	D Sam	ple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170825A		08/25/	17 15:53
Mercury		(0.00186	mg/L	0.00010	93	70	130	4.2	30	
Lab ID:	B17082517-001BMS	Sam	ple Matrix	Spike			Run: HGC\	/202-B_170825A		08/25/	17 16:34
Mercury		(0.00187	mg/L	0.00010	93	70	130			
Lab ID:	B17082517-001BMS	D Sam	ple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170825A		08/25/	17 16:36
Mercury		(0.00185	mg/L	0.00010	92	70	130	1.0	30	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Gina McCartney

B17082461

Date Received: 8/24/2017

Logiii compictod by.	oma modarino,		Date i	10001104. 0/2 1/2011
Reviewed by:	BL2000\tedwards		Red	ceived by: se
Reviewed Date:	8/29/2017		Carr	ier name: FedEx
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes ✓	No 🗌	
Chain of custody agrees with	sample labels?	Yes	No 🔽	
Samples in proper container/	/bottle?	Yes ✓	No 🗌	
Sample containers intact?		Yes 🗹	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🗹	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗸	No 🗌	
Temp Blank received in all sh	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 2.5°C, shipping container 2 was 4.0°C, shipping container 3 was 1.0°C, shipping container 4 was 2.8°C and shipping container 5 was 2.0°C.

The collection time indicated on the container label for sample MNW-11 is 12:00 and on the Chain of Custody it is 13:00. Proceeded with the collection time as indicated on the Chain of Custody.



Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information (if different then Account Information (if different the Account Inf	8
CompanyiName Amec Foster Wheeler	Company/Name	
Contact Grea Seifert	Contact	
Phone 512-715-0360	Phone Phone	100x
Mailing Address 3755 S. Capital of TX Hwy #375	Mailing Address	700
City. State, Zip Austin, TX 78704	City, State, Zip	アンゲーン
Email gres, seitert Damectw. com	Email Control	 : :
Receive Invoice Opy CEmail Receive Report Hard Copy DEmail	Receive Report CHard Copy Email	
Purchase Order Quote Bottle Order	Special Report Formats:	
	□ LEVEL IV □ NELAC □ EDD/EDT (context laboratory) □ Other	

All turnaround times are standard unless marked as MUST be contacted prior to RUSH sample submittal for 00-1918 charges and scheduling -See Instructions Page Energy Laboratories GLE DAG TO See Attached **Analysis Requested** Matrix (See Codes Matrix Codes B - Bioassay V - Vegetation O · Other DW · Drinking Water S - Soils/ Solids W- Water A-Air Number of Containers 7 1700 EPA/State Compliance Arges INo Time Sampler Phone 512-241-232 Project : CCRR ☐ Unprocessed ore (NOT ground or refined)* Collection 1/ce/8 MINING CLIENTS, please indicate sample type. *If ore has been processed or refined, call before sending. Project Name, PWSID, Permit etc. TMPA Sample Identification (Name, Location, Interval, etc.) Sampler Name B. Gieselman Project Information □ Byproduct 11 (e)2 material SFL MW-4 Sample Origin State

903

500

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200

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7007

850

EaBK/SCM/0822

SFL MW-3

1845 7/15

8/0

0955

2/23/17

000/ 1/05

SFL MW-5 SFL MW-7

SFL MW-6

MNW-15 AP MW-3

DUP-1

2001	Date/Ture		B/D/mom	Amount Receipt Number (cashcheck only)
> >	Received by (print)	Received by Leboratory (print)	PATORY USE GREY 18	Y N CC Cash Chart
♦ 6 6 6 1 1 1 1 1 1 1 1 1 1	08/23/17 @ 18/5 Suggium	Signature	Intact Receipt Tems Tems	
	seman	De signed Relinquished by (print) Date/Time	Cooler ID(s) Custody Seals	
10 MNW-18	Record MUST Bri	pe signed	Shipped By	

les submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.
In certain circumstances, samples submitted to Energ

Cash

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EU-COC-12/16 v.1

Receipt Number (cash/check only)

Page 33 of 34



Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information (if different than Account Information)	اق 	Comments
companyiname Amer Foster Wheeler	Company/Name	<u> </u>	H) amalysis
	Contact		100 CO 100 CO
Phone 5/2-795-0360	Phone	υ <u>.</u>	
	Mailing Address	<u>b</u>	A TON MOLECULAR
City, State, Zip Austhn, TX 78704	City, State, Zip		1247-0 MG
+00	Email		
Receive Invoice Offerd Copy Agemail Receive Report Shard Copy Agemail	Receive Report Dident Copy DEmail		
Purchase Order Quote Bottle Order	Special Report Formats:		
Project Information	Matrix Codes Analysis Requested	9	All framework fime are
Project Name, PWSID, Permit, etc. Client: TMPA Project: CCRR	₹ ≱		standard unless marked as
5,	S. Solis.		Energy Laboratories
Sample Origin State TX EPA/State Compliance	B · Bioassay		
MINING CL'ENTS, please indicate sample type. "If ore has been processed or refined, call before sending. □ Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)"	O. Other DW. Dinking DW. Water		charges and scheduling – See Instructions Page
entification Collectio	Number of Matrix C		RUSH
(Name, Location, Interval, etc.) Date	Above)		1A1 7 1A
5FL MW-2 8/a3/17 1200	4 8 3 X	:	ā
2 MNW-11 (1300			700
3 MNW-16		,	600
1	i.e.		5/0
5 Eqbk-BJG-082317 /525	T 10		510-1
6 EQBK/SCM/082317 V /620	> >		21010
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80 6			
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Custody Relinquished by/print) DetayTime Segra Segra Beacond Milest Review (2005)	Received by (print)	Date/Time	III Streethe
Relinquished by (print) DeterTime Sig		八個山	TO COLOMBIA
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Shipped By Cooler ID(s) Custody Seals Interd Receipt Temp 'C 'N C B Y N 'C 'S	i emp Blank On ice Y N Y CC Cas	\$	
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

October 13, 2017

Texas Municipal Power Agency

PO Box 7000

Bryan, TX 77805-7000

Work Order: B17082465 Quote ID: B3997

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 16 samples for Texas Municipal Power Agency on 8/24/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Da	te Matrix	Test
B17082465-001	SFL MW-4	08/22/17 17:00 08/24/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17082465-002	SFL MW-3	08/22/17 18:10 08/24/17	Ground Water	Same As Above
B17082465-003	EQBK/SCM/0822	08/22/17 18:50 08/24/17	Ground Water	Same As Above
B17082465-004	AP MW-3	08/22/17 18:45 08/24/17	Ground Water	Same As Above
B17082465-005	MNW-15	08/22/17 17:15 08/24/17	Ground Water	Same As Above
B17082465-006	DUP-1	08/22/17 0:00 08/24/17	Ground Water	Same As Above
B17082465-007	SFL MW-6	08/23/17 9:55 08/24/17	Ground Water	Same As Above
B17082465-008	SFL MW-7	08/23/17 10:00 08/24/17	Ground Water	Same As Above
B17082465-009	SFL MW-5	08/23/17 11:05 08/24/17	Ground Water	Same As Above
B17082465-010	MNW-18	08/23/17 11:49 08/24/17	Ground Water	Same As Above
B17082465-011	SFL MW-2	08/23/17 12:00 08/24/17	Ground Water	Same As Above
				e
B17082465-014	SSP/AP MW-1	08/23/17 15:50 08/24/17	Ground Water	Same As Above
B17082465-015	EQBK-BJG-082317	08/23/17 15:25 08/24/17	Ground Water	Same As Above
B17082465-016	EQBK/SCM/082317	08/23/17 16:20 08/24/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Revised Date: 10/13/17 **Report Date:** 09/21/17

CASE NARRATIVE

CLIENT: Texas Municipal Power Agency

Project: CCRR Work Order: B17082465

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Revised Report 10/10/2017

Per request from Shari Endy on 9/22/17, re-analyze Radium 228 on sample MNW-15 and DUP-1.

Before re-analysis bottle identifications were verified.

For MNW-15 a result of -0.03 pCi/L was originally reported from an analytical run on 9/14/17. The sample was re-analyzed on 9/27/17 with a result of 1.1 pCi/L. Both results were below the Minimum Detectable Concentration (MDC). The reanalysis result confirmed the original result. The original total of Ra226 and Ra228 was retained.

For DUP-1 a result of 5.7 pCi/L was originally reported from an analytical run on 9/14/17. The sample was re-analyzed on 9/27/17 with a result of 0.80 pCi/L. Since the re-analysis did not meet our replication criteria, a third analysis was performed 10/8/2017 with a result of 1.0 pCi/L. Both re-analysis results were below the MDC. The re-analysis result will be reported. Since the Ra228 value has changed, the total of Ra226 and Ra228 has been revised.

The report has been revised and replaces any previously issued report in its entirety.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-001 Client Sample ID: SFL MW-4

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/22/17 17:00

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.59	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	1.5	pCi/L	U			RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	0.99	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	2.1	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-002 Client Sample ID: SFL MW-3

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/22/17 18:10

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.6	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.39	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	4.4	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	6.1	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-003 **Client Sample ID:** EQBK/SCM/0822

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/22/17 18:50

DateReceived: 08/24/17

Matrix: Ground Water

Analyses	Result	Unite	Qualifiere	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Resuit	Units	Qualifiers	NL .	QUL	Wethou	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.16	pCi/L	U			E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.20	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	0.41	pCi/L	U			RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	2.1	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	0.6	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-004 Client Sample ID: AP MW-3

Revised Date: 10/13/17
Report Date: 09/21/17
Collection Date: 08/22/17 18:45
DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.55	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.19	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	4.2	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	4.8	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-005

Client Sample ID: MNW-15

Revised Date: 10/13/17 **Report Date:** 09/21/17

Collection Date: 08/22/17 17:15

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.28	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	-0.03	pCi/L	U			RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.0	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	0.3	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-006

Client Sample ID: DUP-1

Revised Date: 10/13/17 **Report Date:** 09/21/17

Collection Date: 08/22/17
DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.24	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.13	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	0.80	pCi/L	U			RA-05	09/27/17 23:04 / eli-ca
Radium 228 precision (±)	0.90	pCi/L				RA-05	09/27/17 23:04 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	09/27/17 23:04 / eli-ca
Radium 226 + Radium 228	1.0	pCi/L	U			A7500-RA	10/02/17 16:16 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	10/02/17 16:16 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	10/02/17 16:16 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-007 Client Sample ID: SFL MW-6

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/23/17 09:55

DateReceived: 08/24/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	2.7	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.58	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.16	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	1.2	pCi/L	U			RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	3.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-008 Client Sample ID: SFL MW-7

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/23/17 10:00

DateReceived: 08/24/17

Matrix: Ground Water

Analyses	Result	Unito	Qualifica	ВI	MCL/ QCL	Method	Analysis Data / By
Analyses	Result	Units	Qualifiers	RL	- QOL	wethod	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.69	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	2.7	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	3.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-009 **Client Sample ID:** SFL MW-5

Revised Date: 10/13/17 **Report Date:** 09/21/17

Collection Date: 08/23/17 11:05 DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	2.8	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.59	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	9.6	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	2.3	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.7	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	12.3	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	2.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-010

Client Sample ID: MNW-18

Revised Date: 10/13/17 Report Date: 09/21/17

Collection Date: 08/23/17 11:49

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.8	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.42	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	5.0	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	6.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.





Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-011 Client Sample ID: SFL MW-2

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/23/17 12:00

DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.8	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 precision (±)	0.41	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 226 MDC	0.14	pCi/L				E903.0	09/19/17 08:54 / eli-ca
Radium 228	7.2	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 precision (±)	2.1	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	09/14/17 13:15 / eli-ca
Radium 226 + Radium 228	9.0	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	2.1	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-012

Client Sample ID: MNW-11

Revised Date: 10/13/17 **Report Date:** 09/21/17

Collection Date: 08/23/17 13:00 **DateReceived:** 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.40	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 228	1.6	pCi/L	U			RA-05	09/14/17 15:00 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 226 + Radium 228	2.0	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082465-013

Client Sample ID: MNW-16

Revised Date: 10/13/17 **Report Date:** 09/21/17

Collection Date: 08/23/17 14:26 DateReceived: 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.8	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 precision (±)	0.42	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 228	6.2	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 precision (±)	1.7	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 MDC	2.2	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 226 + Radium 228	8.0	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.8	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-014 Client Sample ID: SSP/AP MW-1

Revised Date: 10/13/17 Report Date: 09/21/17 Collection Date: 08/23/17 15:50

DateReceived: 08/24/17 **Matrix:** Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.35	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 precision (±)	0.18	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 MDC	0.23	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	09/14/17 15:00 / eli-ca
Radium 228 precision (±)	1.3	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 MDC	2.9	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 226 + Radium 228	1.7	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-015 **Client Sample ID:** EQBK-BJG-082317

Revised Date: 10/13/17

Report Date: 09/21/17

Collection Date: 08/23/17 15:25

DateReceived: 08/24/17 **Matrix:** Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.18	pCi/L	U			E903.0	09/19/17 11:04 / eli-ca
Radium 226 precision (±)	0.14	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 228	-0.4	pCi/L	U			RA-05	09/14/17 15:00 / eli-ca
Radium 228 precision (±)	1.6	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 MDC	2.7	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 226 + Radium 228	-0.2	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.6	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082465-016 **Client Sample ID:** EQBK/SCM/082317

Revised Date: 10/13/17
Report Date: 09/21/17

Collection Date: 08/23/17 16:20 **DateReceived:** 08/24/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.25	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 precision (±)	0.17	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	09/19/17 11:04 / eli-ca
Radium 228	1.8	pCi/L	U			RA-05	09/14/17 15:00 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 228 MDC	2.7	pCi/L				RA-05	09/14/17 15:00 / eli-ca
Radium 226 + Radium 228	2.1	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency

Project: CCRR Wor

Revised Date: 10/11/17 Report Date: 09/20/17 Work Order: B17082465

Analyte	Result	Units	RL	%REC	Low Limit	High Lin	nit RPD	RPDLimit	Qual
Method: E903.0								Batch: RA	226-8625
Lab ID: LCS-RA226-8625	Laboratory Cont	rol Sample			Run: G542	M_170904	В	09/19	9/17 08:54
Radium 226	8.7	pCi/L		86	80	12	20		
Lab ID: MB-RA226-8625	Method Blank				Run: G542	M_170904	В	09/19	9/17 08:54
Radium 226	0.06	pCi/L							U
Radium 226 precision (±)	0.1	pCi/L							
Radium 226 MDC	0.2	pCi/L							
Lab ID: B17082465-001AMS	Sample Matrix S	Spike			Run: G542	M_170904	В	09/19	9/17 08:54
Radium 226	15	pCi/L		71	70	13	30		
Lab ID: B17082465-001AMSD	Sample Matrix S	Spike Duplicate			Run: G542	M_170904	В	09/19	9/17 08:54
Radium 226	15	pCi/L		72	70	13	30 2.3	20	

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency

Project: CCRR

Revised Date: 10/11/17 Report Date: 09/20/17

Work Order: B17082465

Analyte	Resu	ılt Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA	228-5586
Lab ID: LCS-228-	RA226-8625 Laborator	/ Control Sampl	le		Run: TENN	IELEC-3_170904	В	09/14	/17 13:15
Radium 228	1	0 pCi/L		99	80	120			
Lab ID: MB-RA22	6-8625 Method B	ank			Run: TENN	IELEC-3_170904	В	09/14	/17 13:15
Radium 228	0	.2 pCi/L							U
Radium 228 precision (:	±)	1 pCi/L							
Radium 228 MDC		2 pCi/L							
Lab ID: B1708246	5-002AMS Sample M	atrix Spike			Run: TENN	IELEC-3_170904	В	09/14	/17 13:15
Radium 228	2	23 pCi/L		92	70	130			
Lab ID: B1708246	5-002AMSD Sample M	atrix Spike Dupl	olicate		Run: TENN	IELEC-3_170904	В	09/14	/17 13:15
Radium 228	2	0 pCi/L		80	70	130	11	20	
Method: RA-05								Batch: RA	228-5619
Lab ID: LCS-228-	RA228-5619 Laborator	/ Control Sampl	le		Run: TENN	IELEC-3_170924	В	09/27	/17 23:04
Radium 228	9	.5 pCi/L		89	80	120			
Lab ID: MB-228-R	A228-5619 Method B	ank			Run: TENN	IELEC-3_170924	В	09/27	7/17 23:04
Radium 228	0	.8 pCi/L							U
Radium 228 precision (:	±) 0	.9 pCi/L							
Radium 228 MDC		1 pCi/L							
Lab ID: C1708076	8-004CMS Sample M	atrix Spike			Run: TENN	IELEC-3_170924	В	09/27	/17 23:04
Radium 228	2	?7 pCi/L		104	70	130			
Lab ID: C1708076	8-004CMSD Sample M	atrix Spike Dupl	olicate		Run: TENN	IELEC-3_170924	В	09/27	7/17 23:04
Radium 228	2	24 pCi/L		93	70	130	12	20	

B17082465

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by:	Gina McCartney	Date Received: 8/24/2017									
Reviewed by:	BL2000\tedwards		Re	eceived by: se							
Reviewed Date:	8/29/2017		Ca	rrier name: FedEx							
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present							
Custody seals intact on all st	nipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Present							
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓							
Chain of custody present?		Yes 🗹	No 🗌								
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌								
Chain of custody agrees with	n sample labels?	Yes	No ✓								
Samples in proper container	/bottle?	Yes ✓	No 🗌								
Sample containers intact?		Yes 🗹	No 🗌								
Sufficient sample volume for	indicated test?	Yes 🗹	No 🗌								
All samples received within h (Exclude analyses that are countries pH, DO, Res Cl, Su	onsidered field parameters	Yes ✓	No 🗌								
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes 🔽	No 🗌	Not Applicable							
Container/Temp Blank tempe	erature:	°C On Ice									
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted							
Water - pH acceptable upon	receipt?	Yes 🗸	No 🗌	Not Applicable							

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 2.5°C, shipping container 2 was 4.0°C, shipping container 3 was 1.0°C, shipping container 4 was 2.8°C and shipping container 5 was 2.0°C.

The collection time indicated on the container label for sample MNW-11 is 12:00 and on the Chain of Custody it is 13:00. Proceeded with the collection time as indicated on the Chain of Custody.

Chain of Custody & Analytical Request Record

Account Information (Billing information)		Report Information	Report Information (if different than Account Information)	Ŏ	Comments	-
Company Name Amec Foster Wheeler		Company/Name			77 C	Ahom Can
Contact Grea Seitert		Contact)	こうとう
Phone 512-715-0360		Phone			25	50140164 0180164
(of TX	11wy #375	Mailing Address			SULV SULV SULV SULV SULV SULV SULV SULV	1742-8 mg
104		City, State, Zip			S	
Email greg. Seifert Damecfw. com		Email				
ABard Copy AEmail Receive Repor	□Hard Copy Leg mail	Receive Report Parfard Copy Email	□Email			
Purchase Order Quote Bott	Bottle Order	Special Report/Formats:	EDD/EDT (contact leboratory) □ Other_			
Project Information		Matrix Codes	Analysis Requested	ted		
Project Name, PWSID, Perzy etc. TMPA Project	Project ; CCRR	W. Water			- sts	All turnaround times are standard unless marked as
Sampler Name B. Giese/man Sampler Phone 5/	Sampler Phone 5/2-241-2321	S Solids S	ع			RUSH.
Sample Origin State T	iance Arges 🗆 No	B - Bioassay	داد			MUST be contacted prior to
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)*	ground or refined)*	O. Other O. Other Water	1pa y		Attache	charges and scheduling – See Instructions Page
Sample Identification	ollection	Number of Matrix See Cords	°S		998	
	8/22/1 /700		×			1708 24/2500/
2 SFL MW-3						2002
3 EaBK/SCM/0822	1850					, -003
4 AP MW-3	1845					400-
5 MNW-15	17/5					_200_
6 DWP-1	 					900-
	8/23/17 0955					700-
8 SFL MW-7	1000					200
9 SFL MW-5	50//					600-/N
10 MNW-18	<i>♦ 1144</i>	→ →	-			010-1
Record MUST Stray Gieselmon 08/2	08/23/17 @ 18/5 Stague	in Heale	Received by (print)	Date/Tipe	Signature C	9
Relinquished by (print)	me Signature		Received by Laboratory (print)	TO X must	Signatur	BIT LAWY
, , , , , , , , , , , , , , , , , , ,		LABORAT		A CONTRACTOR OF THE PARTY OF TH	Section Section	
Shipped by Cooler ID(s) Custody Seals	Intact Receipt Temp	Temp Blank On ice	CC Cash Check	Amount \$	Receipt Num	Receipt Number (cash/eheck only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Chain of Custody & Analytical Request Record

Comments	1 QUAN COM COM		AND MOCKORS	The part of the)		1		All turnaround times are standard unless marked as	RUSH.		charges and scheduling – charges and scheduling – See Instructions Page		TAT	10-201700110	777	277		7/0-7				Sonature	Kpth (Signature wow Call	Service Communication of the C	Receipt Number (cash/check only)
Report Information (if different than Account Information)							Receive Report □ Hard Copy □ Email	ials; NELAC □ EDD/EDT (contact taboratory) □ Other	Analysis Requested		9	اد ا	npəl							> >				Received by (print) Date/Time	Received by Laboratory (print)	A STATE OF THE STA	On Ice Payment Type Amount
Report Info	Company/Name	Contact	Phone	Hwy #375 Mailing Address	City, State, Zip	Email	Hard Copy DEmail	Bottle Order Special Report Ormals;	Matrix Codes	Profect : CCRR W- Water			O - Other Dow - Drinking Dow - Water	Collection Number of Matrix	Time containers	0/43/1/1400 7	7577	1550	/525	V /620 V V				33/17 81815 Signature / Just	Signature		Intact Receipt Temp Temp Blank
Account Information (Billing information)	CompanyiName Amec Foster Wheeler	Contact Greg Seifert	Phone 512-795-0360	Mailing Address 3755 5, Capaylad of TX	City, State, Zip Austh, TX 78704	+ 0	Receive Invoice Offerd Copy DEmail Receive Report Chard Copy		Project Information	Project Name, PWSID, Permit, etc. Client: TMPA	Sampler Name B. Giese Man. Sampler Phone 5	Sample Origin State 7	MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. □ Byproduct 11 (e)2 material □ Unprocessed ore (NOT ground or refined)*	antif	(Name, Location, Interval, etc.)		1	4 SSD/45 Mul-1	5 EQBK-BJG-03317	6 FABK/SCM/0823/7	7	80	10	Record MUST Brian Gresselman 08/33/	Relinquished by (print)		Shipped By Cooler ID(s) Custody Seals

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

EU-COC-12/16 v.1

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ANALYTICAL SUMMARY REPORT

December 15, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17082599

Project Name: CCRR

analysis.

Energy Laboratories Inc Billings MT received the following 11 samples for Texas Municipal Power Agency on 8/25/2017 for

Quote ID: B3997

Lab ID	Client Sample ID	Collect Date F	Receive Date	Matrix	Test
B17082599-001	SSP MW-2	08/24/17 9:30	08/25/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS

B17082599-003	SSP MW-3	08/24/17 10:35 08/25/17	Ground Water	Same As Above
B17082599-004	AP MW-1D	08/24/17 11:00 08/25/17	Ground Water	Same As Above
B17082599-005	SSP MW-4	08/24/17 11:50 08/25/17	Ground Water	Same As Above
B17082599-006	AP MW-5	08/24/17 12:09 08/25/17	Ground Water	Same As Above
B17082599-007	AP MW-4	08/24/17 13:00 08/25/17	Ground Water	Same As Above
B17082599-008	EQBK/SCM/082417	08/24/17 13:30 08/25/17	Ground Water	Same As Above
B17082599-009	EQBK-BJG-082417	08/24/17 13:35 08/25/17	Ground Water	Same As Above
B17082599-010	DUP-2	08/24/17 0:00 08/25/17	Ground Water	Same As Above
B17082599-011	DUP-3	08/24/17 0:00 08/25/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CCRR

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/15/17 **Report Date:** 09/08/17

Work Order: B17082599 CASE NARRATIVE

Revised Report 12/15/2017

CLIENT:

Project:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082599-001 Client Sample ID: SSP MW-2

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 09:30

DateReceived: 08/25/17

					MCL/			
Analyses	Result	Units	Qualifiers	RL		Method	Analysis Date / By	
MAJOR IONS								
Calcium	811	mg/L	D	2		E200.7	09/01/17 18:01 / rlh	
Magnesium	196	mg/L		1		E200.7	09/01/17 18:01 / rlh	
Potassium	57	mg/L		1		E200.7	09/01/17 18:01 / rlh	
Sodium	1080	mg/L	D	8		E200.7	09/01/17 18:01 / rlh	
PHYSICAL PROPERTIES								
Н	4.7	s.u.	Н	0.1		A4500-H B	08/28/17 11:17 / pjw	
Solids, Total Dissolved TDS @ 180 C	6910	mg/L	D	90		A2540 C	08/29/17 08:20 / rik	
NORGANICS								
Chloride	2790	mg/L	D	10		E300.0	08/31/17 04:17 / cjm	
Sulfate	2070	mg/L	D	40		E300.0	08/31/17 04:17 / cjm	
Fluoride	0.3	mg/L		0.1		A4500-F C	09/01/17 15:45 / cjm	
METALS, TOTAL RECOVERABLE								
Antimony	ND	mg/L		0.006		E200.8	08/30/17 22:24 / jpv	
Arsenic	ND	mg/L		0.01		E200.8	08/30/17 22:24 / jpv	
Barium	0.06	mg/L		0.01		E200.8	08/30/17 22:24 / jpv	
Beryllium	0.040	mg/L		0.001		E200.8	08/30/17 22:24 / jpv	
Boron	0.45	mg/L		0.05		E200.8	09/01/17 03:45 / jpv	
Cadmium	ND	mg/L		0.005		E200.8	08/30/17 22:24 / jpv	
Chromium	ND	mg/L		0.01		E200.8	08/30/17 22:24 / jpv	
Cobalt	0.06	mg/L		0.02		E200.8	08/30/17 22:24 / jpv	
Lead	ND	mg/L		0.01		E200.8	08/30/17 22:24 / jpv	
Lithium	0.67	mg/L	D	0.09		E200.7	09/01/17 18:01 / rlh	
Mercury	ND	mg/L		0.001		E245.1	08/29/17 11:53 / jh	
Nolybdenum	ND	mg/L		0.05		E200.8	08/30/17 22:24 / jpv	
Selenium	ND	mg/L		0.01		E200.8	08/30/17 22:24 / jpv	
Гhallium	ND	mg/L		0.002		E200.8	09/01/17 03:45 / jpv	

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082599-003 Client Sample ID: SSP MW-3 Revised Date: 12/15/17

Report Date: 09/08/17

Collection Date: 08/24/17 10:35

DateReceived: 08/25/17

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **MAJOR IONS** Calcium 646 mg/L 1 E200.7 09/01/17 18:28 / rlh 169 mg/L 1 E200.7 09/01/17 18:28 / rlh Magnesium 09/01/17 18:28 / rlh Potassium 47 mg/L 1 E200.7 Sodium 1020 mg/L D 4 E200.7 09/01/17 18:28 / rlh **PHYSICAL PROPERTIES** 4.5 s.u. Н 0.1 A4500-H B рΗ 08/28/17 11:22 / pjw Solids, Total Dissolved TDS @ 180 C 6260 mg/L D 90 A2540 C 08/29/17 08:20 / rik **INORGANICS** Chloride 1790 mg/L D 6 E300.0 08/31/17 05:35 / cjm Sulfate 2510 mg/L D 20 E300.0 08/31/17 05:35 / cjm A4500-F C Fluoride 0.8 mg/L 0.1 09/05/17 13:06 / cjm **METALS, TOTAL RECOVERABLE** Antimony ND mg/L 0.006 E200.8 08/30/17 22:55 / jpv Arsenic ND mg/L 0.01 E200.8 08/30/17 22:55 / jpv 0.03 mg/L Barium 0.01 E200.8 08/30/17 22:55 / jpv Beryllium 0.113 mg/L 0.001 E200.8 08/30/17 22:55 / jpv 2.59 mg/L 0.05 E200.7 09/01/17 18:28 / rlh **Boron** 0.078 mg/L 0.005 Cadmium E200.8 08/30/17 22:55 / jpv Chromium ND mg/L 0.01 E200.8 08/30/17 22:55 / jpv Cobalt 0.58 mg/L 0.02 E200.8 08/30/17 22:55 / jpv Lead ND mg/L 0.01 E200.8 08/30/17 22:55 / jpv Lithium D 0.53 mg/L 0.04 E200.7 09/01/17 18:28 / rlh Mercury ND mg/L 0.001 E245.1 08/29/17 11:57 / jh Molybdenum ND mg/L 0.05 E200.8 08/30/17 22:55 / jpv Selenium ND mg/L 0.01 E200.8 08/30/17 22:55 / jpv Thallium 0.008 mg/L 0.002 E200.8 09/01/17 04:15 / jpv

Report RL - Analyte reporting limit.

Definitions: OCL - Quality control limit

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082599-004 Client Sample ID: AP MW-1D

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 11:00

> DateReceived: 08/25/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	70	mg/L		1		E200.7	09/01/17 18:32 / rlh
Magnesium	13	mg/L		1		E200.7	09/01/17 18:32 / rlh
Potassium	11	mg/L		1		E200.7	09/01/17 18:32 / rlh
Sodium	290	mg/L		1		E200.7	09/01/17 18:32 / rlh
PHYSICAL PROPERTIES							
рН	6.3	s.u.	Н	0.1		A4500-H B	08/28/17 11:25 / pjw
Solids, Total Dissolved TDS @ 180 C	1270	mg/L	D	20		A2540 C	08/29/17 08:21 / rik
INORGANICS							
Chloride	227	mg/L		1		E300.0	08/31/17 06:33 / cjm
Sulfate	517	mg/L	D	4		E300.0	08/31/17 06:33 / cjm
Fluoride	0.8	mg/L		0.1		A4500-F C	09/05/17 13:27 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 22:58 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	08/30/17 22:58 / jpv
Barium	0.01	mg/L		0.01		E200.8	08/30/17 22:58 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/30/17 22:58 / jpv
Boron	4.28	mg/L		0.05		E200.7	09/01/17 18:32 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/30/17 22:58 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 22:58 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/30/17 22:58 / jpv
Lead	ND	mg/L		0.01		E200.8	08/30/17 22:58 / jpv
Lithium	0.01	mg/L		0.01		E200.7	09/01/17 18:32 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:10 / jh
Molybdenum	ND	mg/L		0.05		E200.8	08/30/17 22:58 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 22:58 / jpv
Thallium	ND	mg/L		0.002		E200.8	09/01/17 04:19 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082599-005 Client Sample ID: SSP MW-4 Revised Date: 12/15/17 Report Date: 09/08/17 Collection Date: 08/24/17 11:50

DateReceived: 08/25/17 **Matrix:** Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
MAJOR IONS						
Calcium	365	mg/L		1	E200.7	09/01/17 18:35 / rlh
Magnesium	79	mg/L		1	E200.7	09/01/17 18:35 / rlh
Potassium	52	mg/L		1	E200.7	09/01/17 18:35 / rlh
Sodium	677	mg/L	D	4	E200.7	09/01/17 18:35 / rlh
PHYSICAL PROPERTIES						
ρΗ	6.5	s.u.	Н	0.1	A4500-H	B 08/28/17 11:27 / pjw
Solids, Total Dissolved TDS @ 180 C	3630	mg/L	D	40	A2540 C	08/29/17 08:21 / rik
NORGANICS						
Chloride	1190	mg/L	D	6	E300.0	08/31/17 06:53 / cjm
Sulfate	1170	mg/L	D	20	E300.0	08/31/17 06:53 / cjm
luoride	ND	mg/L		0.1	A4500-F	C 09/05/17 13:30 / cjm
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.006	E200.8	08/30/17 23:01 / jpv
Arsenic	ND	mg/L		0.01	E200.8	08/30/17 23:01 / jpv
Barium	0.02	mg/L		0.01	E200.8	08/30/17 23:01 / jpv
Beryllium	ND	mg/L		0.001	E200.8	08/30/17 23:01 / jpv
Boron	1.15	mg/L		0.05	E200.7	09/01/17 18:35 / rlh
Cadmium	ND	mg/L		0.005	E200.8	08/30/17 23:01 / jpv
Chromium	ND	mg/L		0.01	E200.8	08/30/17 23:01 / jpv
Cobalt	ND	mg/L		0.02	E200.8	08/30/17 23:01 / jpv
ead	ND	mg/L		0.01	E200.8	08/30/17 23:01 / jpv
ithium	0.78	mg/L	D	0.04	E200.7	09/01/17 18:35 / rlh
Mercury	ND	mg/L		0.001	E245.1	08/29/17 12:16 / jh
Nolybdenum	ND	mg/L		0.05	E200.8	08/30/17 23:01 / jpv
Selenium	ND	mg/L		0.01	E200.8	08/30/17 23:01 / jpv
Гhallium	ND	mg/L		0.002	E200.8	09/01/17 04:22 / jpv

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

B Bl :

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082599-006 Client Sample ID: AP MW-5

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 12:09

DateReceived: 08/25/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	498	mg/L		1		E200.7	09/01/17 18:39 / rlh
Magnesium		mg/L		1		E200.7	09/01/17 18:39 / rlh
Potassium	44	mg/L		1		E200.7	09/01/17 18:39 / rlh
Sodium	651	mg/L	D	4		E200.7	09/01/17 18:39 / rlh
PHYSICAL PROPERTIES							
pH	3.6	s.u.	Н	0.1		A4500-H B	08/28/17 11:33 / pjw
Solids, Total Dissolved TDS @ 180 C	4720	mg/L	D	40		A2540 C	08/29/17 08:21 / rik
INORGANICS							
Chloride	473	mg/L	D	6		E300.0	08/31/17 07:12 / cjm
Sulfate	2960	mg/L	D	20		E300.0	08/31/17 07:12 / cjm
Fluoride	1.2	mg/L		0.1		A4500-F C	09/05/17 13:42 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 23:05 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	08/30/17 23:05 / jpv
Barium	0.01	mg/L		0.01		E200.8	08/30/17 23:05 / jpv
Beryllium	0.084	mg/L		0.001		E200.8	08/30/17 23:05 / jpv
Boron	3.26	mg/L		0.05		E200.7	09/01/17 18:39 / rlh
Cadmium	0.010	mg/L		0.005		E200.8	08/30/17 23:05 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:05 / jpv
Cobalt	0.18	mg/L		0.02		E200.8	08/30/17 23:05 / jpv
Lead	ND	mg/L		0.01		E200.8	08/30/17 23:05 / jpv
Lithium	0.45	mg/L	D	0.04		E200.7	09/01/17 18:39 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:18 / jh
Molybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:05 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 23:05 / jpv
Thallium	0.002	mg/L		0.002		E200.8	09/01/17 04:26 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

CCRR Project:

Lab ID: B17082599-007 Client Sample ID: AP MW-4

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 13:00

DateReceived: 08/25/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	489	mg/L		1		E200.7	09/01/17 18:43 / rlh
Magnesium		mg/L		1		E200.7	09/01/17 18:43 / rlh
Potassium		mg/L		1		E200.7	09/01/17 18:43 / rlh
Sodium		mg/L	D	2		E200.7	09/01/17 18:43 / rlh
PHYSICAL PROPERTIES							
Hq	6.0	s.u.	Н	0.1		A4500-H B	08/28/17 11:35 / pjw
Solids, Total Dissolved TDS @ 180 C	4000	mg/L	D	40		A2540 C	08/29/17 08:21 / rik
INORGANICS							
Chloride	543	mg/L	D	3		E300.0	08/31/17 07:32 / cjm
Sulfate	2500	mg/L	D	9		E300.0	08/31/17 07:32 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	09/05/17 13:45 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 23:08 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/30/17 23:08 / jpv
Barium	0.02	mg/L		0.01		E200.8	08/30/17 23:08 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/30/17 23:08 / jpv
Boron	1.96	mg/L		0.05		E200.7	09/01/17 18:43 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/30/17 23:08 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:08 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/30/17 23:08 / jpv
Lead	ND	mg/L		0.01		E200.8	08/30/17 23:08 / jpv
Lithium	0.85	mg/L	D	0.02		E200.7	09/01/17 18:43 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:20 / jh
Molybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:08 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 23:08 / jpv
Thallium	ND	mg/L		0.002		E200.8	09/01/17 04:29 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082599-008 Client Sample ID: EQBK/SCM/082417 Revised Date: 12/15/17 **Report Date:** 09/08/17

Collection Date: 08/24/17 13:30 DateReceived: 08/25/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/01/17 18:53 / rlh
Magnesium	ND	mg/L		1		E200.7	09/01/17 18:53 / rlh
Potassium	ND	mg/L		1		E200.7	09/01/17 18:53 / rlh
Sodium	ND	mg/L		1		E200.7	09/01/17 18:53 / rlh
PHYSICAL PROPERTIES							
oH	6.1	s.u.	Н	0.1		A4500-H B	08/28/17 11:38 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/29/17 08:22 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	08/31/17 07:51 / cjm
Sulfate	ND	mg/L		1		E300.0	08/31/17 07:51 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	09/05/17 13:54 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 23:22 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/30/17 23:22 / jpv
Barium	ND	mg/L		0.01		E200.8	08/30/17 23:22 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/30/17 23:22 / jpv
Boron	ND	mg/L		0.05		E200.7	09/01/17 18:53 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/30/17 23:22 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:22 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/30/17 23:22 / jpv
Lead	ND	mg/L		0.01		E200.8	08/30/17 23:22 / jpv
Lithium	ND	mg/L		0.01		E200.7	09/01/17 18:53 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:22 / jh
Nolybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:22 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 23:22 / jpv
Thallium	ND	mg/L		0.002		E200.8	09/01/17 04:33 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082599-009 Client Sample ID: EQBK-BJG-082417

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 13:35

DateReceived: 08/25/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/01/17 18:56 / rlh
Magnesium	ND	mg/L		1		E200.7	09/01/17 18:56 / rlh
Potassium	ND	mg/L		1		E200.7	09/01/17 18:56 / rlh
Sodium	ND	mg/L		1		E200.7	09/01/17 18:56 / rlh
PHYSICAL PROPERTIES							
Н	5.9	s.u.	Н	0.1		A4500-H B	08/28/17 11:40 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	08/29/17 08:22 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	08/31/17 08:11 / cjm
Sulfate	ND	mg/L		1		E300.0	08/31/17 08:11 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	09/05/17 14:00 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 23:25 / jpv
Arsenic	ND	mg/L		0.01		E200.8	08/30/17 23:25 / jpv
Barium	ND	mg/L		0.01		E200.8	08/30/17 23:25 / jpv
Beryllium	ND	mg/L		0.001		E200.8	08/30/17 23:25 / jpv
Boron	ND	mg/L		0.05		E200.7	09/01/17 18:56 / rlh
Cadmium	ND	mg/L		0.005		E200.8	08/30/17 23:25 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:25 / jpv
Cobalt	ND	mg/L		0.02		E200.8	08/30/17 23:25 / jpv
_ead	ND	mg/L		0.01		E200.8	08/30/17 23:25 / jpv
Lithium	ND	mg/L		0.01		E200.7	09/01/17 18:56 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:24 / jh
Molybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:25 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 23:25 / jpv
Thallium	ND	mg/L		0.002		E200.8	09/01/17 04:36 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082599-010

Client Sample ID: DUP-2

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 DateReceived: 08/25/17

					MCL/		
nalyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
calcium	661	mg/L		1		E200.7	09/01/17 19:00 / rlh
1agnesium	172	mg/L		1		E200.7	09/01/17 19:00 / rlh
otassium	47	mg/L		1		E200.7	09/01/17 19:00 / rlh
odium	1030	mg/L	D	4		E200.7	09/01/17 19:00 / rlh
HYSICAL PROPERTIES							
Н	4.5	s.u.	Н	0.1		A4500-H B	08/28/17 11:43 / pjw
olids, Total Dissolved TDS @ 180 C	6100	mg/L	D	90		A2540 C	08/29/17 08:22 / rik
NORGANICS							
Chloride	1840	mg/L	D	6		E300.0	08/31/17 08:30 / cjm
Sulfate	2570	mg/L	D	20		E300.0	08/31/17 08:30 / cjm
luoride	0.8	mg/L		0.1		A4500-F C	09/05/17 14:09 / cjm
METALS, TOTAL RECOVERABLE							
ntimony	ND	mg/L		0.006		E200.8	08/30/17 23:29 / jpv
rsenic	ND	mg/L		0.01		E200.8	08/30/17 23:29 / jpv
arium	0.03	mg/L		0.01		E200.8	08/30/17 23:29 / jpv
eryllium	0.112	mg/L		0.001		E200.8	08/30/17 23:29 / jpv
soron	2.70	mg/L		0.05		E200.7	09/01/17 19:00 / rlh
Cadmium	0.075	mg/L		0.005		E200.8	08/30/17 23:29 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:29 / jpv
Cobalt	0.57	mg/L		0.02		E200.8	08/30/17 23:29 / jpv
ead	ND	mg/L		0.01		E200.8	08/30/17 23:29 / jpv
ithium	0.55	mg/L	D	0.04		E200.7	09/01/17 19:00 / rlh
lercury	ND	mg/L		0.001		E245.1	08/29/17 12:26 / jh
lolybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:29 / jpv
elenium	ND	mg/L		0.01		E200.8	08/30/17 23:29 / jpv
hallium	0.007	mg/L		0.002		E200.8	09/01/17 04:40 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082599-011

Client Sample ID: DUP-3

Revised Date: 12/15/17 **Report Date:** 09/08/17 Collection Date: 08/24/17 DateReceived: 08/25/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	496	mg/L		1		E200.7	09/01/17 19:04 / rlh
Magnesium	112	mg/L		1		E200.7	09/01/17 19:04 / rlh
Potassium	41	mg/L		1		E200.7	09/01/17 19:04 / rlh
Sodium	638	mg/L	D	4		E200.7	09/01/17 19:04 / rlh
PHYSICAL PROPERTIES							
Н	3.6	s.u.	Н	0.1		A4500-H B	08/28/17 11:45 / pjw
Solids, Total Dissolved TDS @ 180 C	4670	mg/L	D	40		A2540 C	08/29/17 08:22 / rik
NORGANICS							
Chloride	471	mg/L	D	6		E300.0	08/31/17 09:29 / cjm
Sulfate	2940	mg/L	D	20		E300.0	08/31/17 09:29 / cjm
Fluoride	1.2	mg/L		0.1		A4500-F C	09/05/17 14:21 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	08/30/17 23:32 / jpv
Arsenic	0.01	mg/L		0.01		E200.8	08/30/17 23:32 / jpv
Barium	0.01	mg/L		0.01		E200.8	08/30/17 23:32 / jpv
Beryllium	0.085	mg/L		0.001		E200.8	08/30/17 23:32 / jpv
Boron	3.31	mg/L		0.05		E200.7	09/01/17 19:04 / rlh
Cadmium	0.010	mg/L		0.005		E200.8	08/30/17 23:32 / jpv
Chromium	ND	mg/L		0.01		E200.8	08/30/17 23:32 / jpv
Cobalt	0.18	mg/L		0.02		E200.8	08/30/17 23:32 / jpv
_ead	ND	mg/L		0.01		E200.8	08/30/17 23:32 / jpv
_ithium	0.43	mg/L	D	0.04		E200.7	09/01/17 19:04 / rlh
Mercury	ND	mg/L		0.001		E245.1	08/29/17 12:27 / jh
Molybdenum	ND	mg/L		0.05		E200.8	08/30/17 23:32 / jpv
Selenium	ND	mg/L		0.01		E200.8	08/30/17 23:32 / jpv
Thallium	0.002	mg/L		0.002		E200.8	09/01/17 04:53 / jpv

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Rui	n: ICP203-B_	_170901A
Lab ID:	ICV	6 Cc	ntinuing Cal	ibration Verifica	ation Standa	rd				09/01/	17 12:41
Boron			2.48	mg/L	0.10	99	95	105			
Calcium			25.9	mg/L	1.0	104	95	105			
Lithium			1.29	mg/L	0.10	104	95	105			
Magnesiun	n		25.3	mg/L	1.0	101	95	105			
Potassium			25.7	mg/L	1.0	103	95	105			
Sodium			25.8	mg/L	1.0	103	95	105			
Method:	E200.7									Batcl	n: 113054
Lab ID:	MB-113054	6 Me	thod Blank				Run: ICP20	3-B_170901A		09/01/	17 17:32
Boron			ND	mg/L	0.003						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiun	n		ND	mg/L	0.01						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Lab ID:	LCS-113054	6 La	boratory Cor	ntrol Sample			Run: ICP20	3-B_170901A		09/01/	17 17:36
Boron			0.473	mg/L	0.10	95	85	115			
Calcium			25.7	mg/L	1.0	103	85	115			
Lithium			0.499	mg/L	0.10	100	85	115			
Magnesiun	n		26.4	mg/L	1.0	105	85	115			
Potassium			25.2	mg/L	1.0	101	85	115			
Sodium			25.7	mg/L	1.0	103	85	115			
Lab ID:	B17082663-006BMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_170901A		09/01/	17 17:54
Boron			0.459	mg/L	0.050	92	70	130			
Calcium			159	mg/L	1.0		70	130			Α
Lithium			0.515	mg/L	0.10	103	70	130			
Magnesiun	n		101	mg/L	1.0	96	70	130			
Potassium			28.6	mg/L	1.0	103	70	130			
Sodium			29.0	mg/L	1.0	99	70	130			
Lab ID:	B17082663-006BMSD) 6 Sa	mple Matrix	Spike Duplicate	е		Run: ICP20	3-B_170901A		09/01/	17 17:57
Boron			0.446	mg/L	0.050	89	70	130	3.0	20	
Calcium			157	mg/L	1.0		70	130	1.0	20	Α
Lithium			0.488	mg/L	0.10	98	70	130	5.3	20	
Magnesiun	n		101	mg/L	1.0	95	70	130	0.2	20	
Potassium			27.0	mg/L	1.0	96	70	130	5.9	20	
Sodium			28.1	mg/L	1.0	95	70	130	3.0	20	
Lab ID:	B17082599-001BMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_170901A		09/01/	17 18:18
Boron			0.939	mg/L	0.068	116	70	130			
Calcium			864	mg/L	1.6		70	130			Α
Lithium			1.18	mg/L	0.10	102	70	130			
Magnesiun	n		232	mg/L	1.5		70	130			Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

ND - Not detected at the reporting limit.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency **Report Date:** 09/07/17 Project: CCRR Work Order: B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	n: 113054
Lab ID:	B17082599-001BMS3	6 Sa	mple Matrix	Spike			Run: ICP20	3-B_170901A		09/01/	17 18:18
Potassium			83.5	mg/L	1.4	107	70	130			
Sodium			1150	mg/L	8.4		70	130			Α
Lab ID:	B17082599-001BMSI	o 6 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170901A		09/01/	17 18:21
Boron			0.843	mg/L	0.068	96	70	130	11	20	
Calcium			833	mg/L	1.6		70	130	3.7	20	Α
Lithium			1.16	mg/L	0.10	98	70	130	1.8	20	
Magnesium	ı		223	mg/L	1.5		70	130	3.7	20	Α
Potassium			80.8	mg/L	1.4	97	70	130	3.3	20	
Sodium			1110	mg/L	8.4		70	130	3.2	20	Α

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count Res	ult Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	l Run: I	CPMS206-B_	_170831A
Lab ID:	QCS	10 Initial Cali	bration Verifi	cation Standard					08/30/	17 17:30
Antimony		0.05	23 mg/L	0.050	105	90	110			
Arsenic		0.05	10 mg/L	0.0050	102	90	110			
Barium		0.05	12 mg/L	0.10	102	90	110			
Beryllium		0.02	60 mg/L	0.0010	104	90	110			
Cadmium		0.02	64 mg/L	0.0010	106	90	110			
Chromium		0.05	22 mg/L	0.010	104	90	110			
Cobalt		0.05	29 mg/L	0.010	106	90	110			
Lead		0.05	03 mg/L	0.010	101	90	110			
Molybdenu	ım	0.04	94 mg/L	0.0050	99	90	110			
Selenium		0.05	04 mg/L	0.0050	101	90	110			
Method:	E200.8								Batch	h: 113054
Lab ID:	MB-113054	12 Method Bl	ank			Run: ICPM	S206-B_170831 <i>F</i>	4	08/30/	17 22:20
Antimony		0.000	09 mg/L	0.00004						
Arsenic		1	ND mg/L	0.0002						
Barium		1	ND mg/L	0.00005						
Beryllium		1	ND mg/L	0.00008						
Boron		0.	09 mg/L	0.003						
Cadmium		1	ND mg/L	0.00003						
Chromium		0.00	08 mg/L	0.0001						
Cobalt		1	ND mg/L	0.00002						
Lead		1	ND mg/L	0.00003						
Molybdenu	ım	1	ND mg/L	0.00003						
Selenium		1	ND mg/L	0.0004						
Thallium		1	ND mg/L	7E-06						
Lab ID:	LCS-113054	12 Laborator	/ Control Sa	mple		Run: ICPM	S206-B_170831 <i>F</i>	4	08/30/	17 22:37
Antimony		0.5	64 mg/L	0.0050	113	85	115			
Arsenic		0.5	28 mg/L	0.0010	106	85	115			
Barium		0.5	24 mg/L	0.010	105	85	115			
Beryllium		0.2	45 mg/L	0.0010	98	85	115			
Boron		0.5	96 mg/L	0.10	100	85	115			
Cadmium		0.2	72 mg/L	0.0010	109	85	115			
Chromium		0.5	06 mg/L	0.0010	101	85	115			
Cobalt		0.5	24 mg/L	0.0010	105	85	115			
Lead		0.5	16 mg/L	0.0010	103	85	115			
Molybdenu	ım	0.5	08 mg/L	0.0050	102	85	115			
Selenium		0.5	05 mg/L	0.0050	101	85	115			
Thallium		0.5	68 mg/L	0.0010	114	85	115			
Lab ID:	B17082599-001BMS3	3 12 Sample M	atrix Spike			Run: ICPM	S206-B_170831 <i>F</i>	4	08/30/	17 22:41
Antimony		0.5	20 mg/L	0.0010	104	70	130			
Arsenic		0.5	_	0.0010	109	70	130			
Barium		0.5	_	0.050	100	70	130			
Beryllium		0.2		0.0010	94	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count F	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batcl	n: 113054
Lab ID:	B17082599-001BMS3	12 Sampl	e Matrix	Spike			Run: ICPM	S206-B_170831A		08/30/	17 22:41
Boron			1.50	mg/L	0.050	82	70	130			
Cadmium			0.270	mg/L	0.0010	108	70	130			
Chromium			0.509	mg/L	0.0050	101	70	130			
Cobalt			0.550	mg/L	0.0050	98	70	130			
Lead			0.490	mg/L	0.0010	97	70	130			
Molybdenu	m		0.501	mg/L	0.0010	100	70	130			
Selenium			0.502	mg/L	0.0018	100	70	130			
Thallium			0.441	mg/L	0.00050	88	70	130			
Lab ID:	B17082599-001BMSD	12 Sampl	e Matrix	Spike Dupl	licate		Run: ICPM	S206-B_170831A		08/30/	17 22:44
Antimony			0.514	mg/L	0.0010	103	70	130	1.2	20	
Arsenic			0.567	mg/L	0.0010	112	70	130	3.1	20	
Barium			0.569	mg/L	0.050	103	70	130	2.8	20	
Beryllium			0.286	mg/L	0.0010	98	70	130	3.8	20	
Boron			1.49	mg/L	0.050	80	70	130	0.6	20	
Cadmium			0.276	mg/L	0.0010	110	70	130	2.2	20	
Chromium			0.536	mg/L	0.0050	107	70	130	5.3	20	
Cobalt			0.568	mg/L	0.0050	102	70	130	3.2	20	
Lead			0.520	mg/L	0.0010	104	70	130	6.0	20	
Molybdenu	m		0.491	mg/L	0.0010	98	70	130	2.1	20	
Selenium			0.530	mg/L	0.0018	106	70	130	5.5	20	
Thallium			0.467	mg/L	0.00050	93	70	130	5.9	20	
Lab ID:	B17082663-006BMS3	12 Sampl	e Matrix	Spike			Run: ICPM	S206-B_170831A		08/31/	17 00:10
Antimony			0.557	mg/L	0.0010	111	70	130			
Arsenic			0.528	mg/L	0.0010	106	70	130			
Barium			0.578	mg/L	0.050	105	70	130			
Beryllium			0.236	mg/L	0.0010	94	70	130			
Boron			0.528	mg/L	0.050	105	70	130			
Cadmium			0.274	mg/L	0.0010	110	70	130			
Chromium			0.525	mg/L	0.0050	105	70	130			
Cobalt			0.504	mg/L	0.0050	101	70	130			
Lead			0.522	mg/L	0.0010	104	70	130			
Molybdenu	m		0.504	mg/L	0.0010	100	70	130			
Selenium			0.511	mg/L	0.0010	102	70	130			
Thallium			0.574	mg/L	0.00050	115	70	130			
Lab ID:	B17082663-006BMSD	12 Sampl	e Matrix	Spike Dupl	licate		Run: ICPM	S206-B_170831A		08/31/	17 00:13
Antimony			0.556	mg/L	0.0010	111	70	130	0.2	20	
Arsenic			0.517	mg/L	0.0010	103	70	130	2.0	20	
Barium			0.576	mg/L	0.050	104	70	130	0.3	20	
Beryllium			0.237	mg/L	0.0010	95	70	130	0.7	20	
Boron			0.547	mg/L	0.050	109	70	130	3.5	20	
Cadmium			0.268	mg/L	0.0010	107	70	130	2.3	20	
Chromium			0.514	mg/L	0.0050	103	70	130	2.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	ı: 113054
Lab ID:	B17082663-006BMS	D 12 Sam	ple Matrix	Spike Duplicate			Run: ICPM	S206-B_170831A	ı	08/31/	17 00:13
Cobalt			0.510	mg/L	0.0050	102	70	130	1.3	20	
Lead			0.513	mg/L	0.0010	103	70	130	1.7	20	
Molybdenu	m		0.508	mg/L	0.0010	101	70	130	8.0	20	
Selenium			0.513	mg/L	0.0010	103	70	130	0.3	20	
Thallium			0.561	mg/L	0.00050	112	70	130	2.4	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E2	200.8							Analytical	Run: I	CPMS206-B_	170831B
Lab ID: QC	cs	2 Initi	al Calibration	on Verificat	ion Standard					08/31/	17 23:28
Boron			0.0483	mg/L	0.10	97	90	110			
Thallium			0.0502	mg/L	0.10	100	90	110			
Method: E2	200.8									Batcl	n: 113054
Lab ID: ME	3-113054	12 Me	thod Blank				Run: ICPM	S206-B_170831B	}	09/01/	17 03:41
Antimony			0.00009	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.00003						
Chromium			0.0007	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			0.00003	mg/L	0.00003						
Molybdenum			0.0001	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.00004	mg/L	7E-06						
				-							
Lab ID: LC	S-113054	12 Lab	oratory Co		е		Run: ICPM	S206-B_170831B	3	09/01/	17 03:48
Antimony			0.564	mg/L	0.0010	113	85	115			
Arsenic			0.517	mg/L	0.0010	103	85	115			
Barium			0.536	mg/L	0.050	107	85	115			
Beryllium			0.251	mg/L	0.0010	100	85	115			
Boron			0.502	mg/L	0.050	100	85	115			
Cadmium			0.263	mg/L	0.0010	105	85	115			
Chromium			0.522	mg/L	0.0050	104	85	115			
Cobalt			0.532	mg/L	0.0050	106	85	115			
Lead			0.530	mg/L	0.0010	106	85	115			
Molybdenum			0.505	mg/L	0.0010	101	85	115			
Selenium			0.521	mg/L	0.0010	104	85	115			
Thallium			0.531	mg/L	0.00050	106	85	115			
Lab ID: B1	7082599-001BMS3	12 Sar	nple Matrix	Spike			Run: ICPM	S206-B_170831B	}	09/01/	17 03:52
Antimony			0.531	•	0.0010	106	70	130			
Arsenic			0.538	mg/L	0.0016	107	70	130			
Barium			0.562	mg/L	0.050	100	70	130			
Beryllium			0.285	mg/L	0.0010	96	70	130			
Boron			1.01	mg/L	0.050	113	70	130			
Cadmium			0.269	mg/L	0.0010	108	70	130			
Chromium			0.209	mg/L	0.0010	107	70	130			
Cobalt			0.537		0.0050	107	70 70	130			
				mg/L							
Lead			0.516	mg/L	0.0010	103	70 70	130			
Molybdenum			0.504	mg/L	0.0010	100	70 70	130			
Selenium			0.526	mg/L	0.0036	105	70	130			
Thallium			0.420	mg/L	0.00050	84	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 113054
Lab ID:	B17082599-001BMS3	12 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170831B		09/01/	17 03:52
Lab ID:	B17082599-001BMSE) 12 San	nple Matrix	Spike Duplicate			Run: ICPM	S206-B_170831B		09/01/	17 03:55
Antimony			0.537	mg/L	0.0010	107	70	130	1.1	20	
Arsenic			0.564	mg/L	0.0016	112	70	130	4.8	20	
Barium			0.609	mg/L	0.050	110	70	130	8.0	20	
Beryllium			0.300	mg/L	0.0010	102	70	130	5.1	20	
Boron			1.00	mg/L	0.050	111	70	130	1.1	20	
Cadmium			0.278	mg/L	0.0010	111	70	130	3.3	20	
Chromium			0.557	mg/L	0.0050	111	70	130	3.8	20	
Cobalt			0.604	mg/L	0.0050	108	70	130	5.4	20	
Lead			0.541	mg/L	0.0010	107	70	130	4.7	20	
Molybdenu	m		0.512	mg/L	0.0010	102	70	130	1.6	20	
Selenium			0.560	mg/L	0.0036	112	70	130	6.3	20	
Thallium			0.446	mg/L	0.00050	89	70	130	6.0	20	

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/07/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	l Run: l	HGCV202-B_	_170829A
Lab ID:	ICV	Initi	al Calibrati	on Verificatio	on Standard					08/29/	17 09:26
Mercury			0.00190	mg/L	0.00010	95	90	110			
Method:	E245.1									Batcl	n: 113075
Lab ID:	MB-113075	Met	thod Blank				Run: HGC\	/202-B_170829A		08/29/	17 11:06
Mercury			0.00001	mg/L	1E-06						
Lab ID:	LCS-113075	Lab	oratory Co	ntrol Sample	e		Run: HGC\	/202-B_170829A		08/29/	17 11:08
Mercury			0.00203	mg/L	0.00010	101	85	115			
Lab ID:	B17082668-005BMS	Sar	nple Matrix	Spike			Run: HGC\	/202-B_170829A		08/29/	17 11:15
Mercury			0.00200	mg/L	0.00010	99	70	130			
Lab ID:	B17082668-005BMS	D Sar	mple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170829A		08/29/	17 11:17
Mercury			0.00200	mg/L	0.00010	99	70	130	0.0	30	
Lab ID:	B17082599-003BMS	Sar	mple Matrix	Spike			Run: HGC\	/202-B_170829A		08/29/	17 13:18
Mercury			0.00192	mg/L	0.00010	92	70	130			
Lab ID:	B17082599-003BMS	D Sar	nple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170829A		08/29/	17 13:20
Mercury			0.00193	mg/L	0.00010	93	70	130	0.6	30	
Method:	E245.1									Batcl	n: 113077
Lab ID:	MB-113077	Met	thod Blank				Run: HGC\	/202-B_170829A		08/29/	17 12:03
Mercury			4E-06	mg/L	1E-06						
Lab ID:	LCS-113077	Lab	oratory Co	ntrol Sample)		Run: HGC\	/202-B_170829A		08/29/	17 12:05
Mercury			0.00209	mg/L	0.00010	104	85	115			
Lab ID:	B17082599-004BMS	Sar	nple Matrix	Spike			Run: HGC\	/202-B_170829A		08/29/	17 12:12
Mercury			0.00178	mg/L	0.00010	88	70	130			
Lab ID:	B17082599-004BMS	D Sar	mple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170829A		08/29/	17 12:14
Mercury			0.00180	mg/L	0.00010	89	70	130	1.2	30	
Lab ID:	B17082614-002BMS	Sar	mple Matrix	Spike			Run: HGC\	/202-B_170829A		08/29/	17 12:43
Mercury			0.00228	mg/L	0.00010	113	70	130			
Lab ID:	B17082614-002BMS	D Sar	mple Matrix	Spike Dupli	cate		Run: HGC\	/202-B_170829A		08/29/	17 12:45
Mercury			0.00226	mg/L	0.00010	112	70	130	0.6	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/06/17Project:CCRRWork Order:B17082599

Analyte	Count Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batcl	n: 113120
Lab ID: MB-113120	Method Blank				Run: BAL #	SD-15_170829A		08/29/	17 08:18
Solids, Total Dissolved TDS @ 18	30 C ND	mg/L	4						
Lab ID: LCS-113120 Solids, Total Dissolved TDS @ 18	Laboratory Co 30 C 991	ontrol Sample mg/L	10	99	Run: BAL #	SD-15_170829A 110		08/29/	17 08:19
Lab ID: B17082598-008A DU	P Sample Dupli	cate			Run: BAL #	SD-15_170829A		08/29/	17 08:19
Solids, Total Dissolved TDS @ 18	30 C 2390	mg/L	20				0.1	5	
Lab ID: B17082599-006A DU Solids, Total Dissolved TDS @ 18	- Gampio Bapii	cate mg/L	39		Run: BAL #	SD-15_170829A	1.5	08/29/ 5	17 08:21

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Report Date: 09/06/17

Project: CCRR

Work Order: B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytica	al Run:	MAN-TECH_	170901A
Lab ID:	ICV	Initia	al Calibration	on Verification Sta	ndard					09/01/	17 15:08
Fluoride			1.02	mg/L	0.10	102	90	110			
Method:	A4500-F C									Batch:	R286042
Lab ID:	MBLK	Meth	nod Blank				Run: MAN-	TECH_170901A		09/01/	17 15:06
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Labo	oratory For	tified Blank			Run: MAN-	TECH 170901A		09/01/	17 15:11
Fluoride			1.05	mg/L	0.10	105	90	110			
Lab ID:	B17082598-005AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170901A		09/01/	17 15:16
Fluoride			1.59	mg/L	0.10	106	80	120			
Lab ID:	B17082598-005AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170901A		09/01/	17 15:19
Fluoride			1.56	mg/L	0.10	103	80	120	1.9	10	
Lab ID:	B17082599-011AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170901A		09/01/	17 17:17
Fluoride			1.47	mg/L	0.10	37	80	120			S
Lab ID:	B17082599-011AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170901A		09/01/	17 17:29
Fluoride			1.47	mg/L	0.10	37	80	120	0.0	10	S
Method:	A4500-F C							Analytica	al Run:	MAN-TECH_	_170905A
Lab ID:	ICV	Initia	al Calibration	on Verification Sta	ndard					09/05/	17 12:55
Fluoride			1.05	mg/L	0.10	105	90	110			
Method:	A4500-F C									Batch:	R286127
Lab ID:	MBLK	Meth	nod Blank				Run: MAN-	TECH_170905A		09/05/	17 12:53
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Labo	oratory For	tified Blank			Run: MAN-	TECH_170905A		09/05/	17 12:58
Fluoride			1.08	mg/L	0.10	108	90	110			
Lab ID:	B17082599-003AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170905A		09/05/	17 13:15
Fluoride			1.60	mg/L	0.10	82	80	120			
Lab ID:	B17082599-003AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170905A		09/05/	17 13:24
Fluoride			1.62	mg/L	0.10	84	80	120	1.2	10	
Lab ID:	B17082614-001AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170905A		09/05/	17 14:26
Fluoride			1.25	mg/L	0.10	101	80	120			
Lab ID:	B17082614-001AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170905A		09/05/	17 14:29
Fluoride			1.27	mg/L	0.10	103	80	120	1.6	10	

Qualifiers:

RL - Analyte reporting limit.

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/06/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PF	ISC _101-B_	_170828A
Lab ID:	pH 8	Initia	al Calibratio	n Verifica	tion Standard					08/28/	17 08:36
рН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R285634
Lab ID:	B17082599-005ADU	P San	nple Duplica	ate			Run: PHSC	_101-B_1708	28A	08/28/	17 11:30
рН			6.53	s.u.	0.10				0.2	3	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/06/17Project:CCRRWork Order:B17082599

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC N	/IETROHM 2_	_170830A
Lab ID:	ICV	2 Init	ial Calibratio	n Verification Sta	ndard					08/30/	17 17:14
Chloride			2.17	mg/L	1.0	96	90	110			
Sulfate			8.85	mg/L	1.0	98	90	110			
Method:	E300.0									Batch:	R285893
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 2_170	0830A	08/30/	17 17:33
Chloride			0.04	mg/L	0.03						
Sulfate			ND	mg/L	0.02						
Lab ID:	LFB	2 Lal	ooratory Fort	tified Blank			Run: IC ME	TROHM 2_17	0830A	08/30/	17 17:53
Chloride			10.5	mg/L	1.0	104	90	110			
Sulfate			31.2	mg/L	1.0	104	90	110			
Lab ID:	B17082599-001AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_170	0830A	08/31/	17 04:36
Chloride			4840	mg/L	12	103	90	110			
Sulfate			8560	mg/L	37	108	90	110			
Lab ID:	B17082599-001AMSI) 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_170	0830A	08/31/	17 04:56
Chloride			4830	mg/L	12	102	90	110	0.1	20	
Sulfate			8580	mg/L	37	108	90	110	0.3	20	
Lab ID:	B17082599-010AMS	2 Sa	mple Matrix	Spike			Run: IC ME	TROHM 2_170	0830A	08/31/	17 08:50
Chloride			2820	mg/L	6.1	98	90	110			
Sulfate			5700	mg/L	18	104	90	110			
Lab ID:	B17082599-010AMSI) 2 Sa	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 2_170	0830A	08/31/	17 09:09
Chloride			2800	mg/L	6.1	96	90	110	0.6	20	
Sulfate			5670	mg/L	18	103	90	110	0.5	20	

Work Order Receipt Checklist

Texas Municipal Power Agency

B17082599

Login completed by:	Gina McCartney		Date	Received: 8/25/2017
Reviewed by:	BL2000\tedwards		Re	ceived by: se
Reviewed Date:	8/31/2017		Car	rier name: FedEx
Shipping container/cooler in	good condition?	Yes 🔽	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes ✓	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes ✓	No 🗌	
Chain of custody agrees with	n sample labels?	Yes ✓	No 🗌	
Samples in proper container	/bottle?	Yes ✓	No 🗌	
Sample containers intact?		Yes ✓	No 🗌	
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌	
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted ✓
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The temperature of the sample(s) for shipping container 1 was 2.0°C, shipping container 2 was 1.1°C, shipping container 3 was 1.7°C and shipping container 4 was 4.4°C.



Chain of Custody & Analytical Request Record

	www.erlergylab.com	C 3- 1 ODGG
Account Information (Billing information)	Report Information if different than Account Informations	To age
Company/Name Amec Foster Wheeler	Company/Name	Comments
Contact Greg Selfert	Contact	Al analysis
Phone 512-795-0360	Phone	proort pod Jom
Mailing Address 3755 S. Capital of TX Hwy. #375	Mailing Address	ころうとうことできる
City, State, Zip Austin, TX 78704	City, State, Zip	17 17 0 80
Email greg. seifert @amectu, com	Email	11-57-8 111R
Mard Cop	Receive Report □ Hard Copy □ Email	
Purchase Order Quote Bottle Order	Special Report of mals:	
	□ LEVEL IV □ NELAC □ EDD/EDT (contact isboratory) □ Other	

Contact Gree Selfert	Contact	E Signs S
Phone 512-795-0360	Phone	pront pod town
Mailing Address 3755 S. Capital of TX Huy #375	Mailing Address	でいることで
City, State, Zip Austin, TX 18704	City, State, Zip	
Email greg. Seifert Damectu, com	Email	11-57-81118
mail Receive Repo	Receive Report Hard Copy Email	ه.
Hottle Order	Special Report Commats:	
Project Information	Water Codes	
	Maura Codes	
Project Name, PWSID, Permit, etc. Clent: TMPA Project: CCRR	W- Water	All turnaround times are
Sampler Name B. Gieselman Sampler Phone 5/2-241-2321	S- Solids	standard unless marked as RUSH.
	V Venetation	

						I							
Project Information			Matrix	Matrix Codes									
			Α - Δίτ				A	Analysis Requested	(equest	g			
Project Name, PWSID, Permit, etc. //ent: TMPA Project: CCRR	Project: C	LRR	W- Water	Vater						-			All turnaround times are
Sampler Name B. Giese/mag	Sampler Phone 512-241-3321	2321	Ś	Solls/ Solids							<u> </u>		standard unless marked as RUSH.
	EPA/State Compliance XOes □ No	°N □	> 60	V - Vegetation B - Bioassay	T	e							Energy Laboratories
MINING CLIENTS, please indicate sample type. 'If ore has been processed or refined, call before sending. Byproduct 11 (e)2 material	Sec 10	* 1	O - Other Dw - Drinking	ther rinking	عاساه	الداد	 .			_		gched	RUSH sample submittal for charges and scheduling -
	or growing or refin	ea)			<i>ا</i> (ج	<i>ب</i> اد						:n\	See Instructions Page
Sample Identification	Collection	tion	Number of	Matrix	r	7						/ a	
(Name, Location, Interval, etc.)	Date	Time	Containers	(See Codes	S	S						es	RUSH KELTLABYD
1 SSP MW-2	8/24/17 0920	2420	7	1.1	>	 >		\downarrow		+	+	+	TAT Laboratory (1se Dring
2 AP MILL /	11/20	2		3	<	<	+	_					18170X3X3X00
	_							_		_			

				_ ? 	- -	_		13		
Sample Identification	Collection	ction	l	Y	Y			V		•
(Name, Location, Interval, etc.)	Date	Time	Containers (See Codes	25	~S		_	995	THE THE	LELABID
1 SSP MW-2	8/24/17 09	0420	7.	×	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			3	Š	Sug out
2 AP MW-6		0943	3 ~		4			+	8170%	10895470
3 SSP MW-3		1035						+		9
4 AP MW-1D		1100							-	9
5 SSP MW-4		1/50		-				+		9
· APMW-5		1209						+		ç Q Q
7 AP MW-4		/300		-				+		9
8 EQBK/SCM/082417		/330							<u> </u>	90
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to DUP-2	>	1	>	>					+	9
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Chain of Custody & Analytical Request Record

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Account	Account Information (Billing information)		Report Information (if different then Account Information)	I (if different then A	to the transfers			5 4 26
Company/Name	no Amec Faster Wheeler		Company/Name		(including the control of the contro			ants
	Greg Seifert		Contact					
Phone \mathcal{L}	512-795-0360		Phone					
Mailing Addres	3755 S. Capital of TX	Hwx, #375	Mailing Address					
텵	Austin, TX 78704		City, State, Zip					
Email 916	Seifert Dame		Email				_	
Receive Invoice	Mard Copy Memail	Receive Report DHard Copy Atmail	Receive Report Urfard Copy Email	y ⊟Email				
		Bottle Order	Special Report omats:	☐ EDD/EDT (contact faboratory)	aboratory) 🗆 Other			٨
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Project Name,	Project Name, PWSID, Permit, etc. // 'a+ : TM PL	00/0.7	A. Air		Analysis Kequested	sted		All turnaround times are
Sampler Name	Sampler Name Brian Gresofman Sampler Phone	Sampler Phone 5/7_34/-3431	S Solids					standard unless marked as RUSH.
Sample Origin State		mpliance (Nes 🗆 No	V - Vegetation B - Bioassay	0 -				Energy Laboratories
MINING CLIENTS, please indicant of ore has been processed or re Byproduct 11 (e)2 material	MINING CLIENTS, please indicate sample type. If ore has been processed or refined, call before sending. ☐ Byproduct 11 (e)2 material ☐ Unprocessed ore (NOT ground or refined)*)T ground or refined)*	O. Other Dinking DW. Water	Juba		- 14	peyset	RUSH sample submittal for charges and scheduling – See Instructions Page
	Sample Identification (Name, Location, Interval, etc.)	Collection	Number of Matrix Secontainers (See Cootes	12S				
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5		Date/Fime Signature		Received by Laboratory (print)	ratory (print)	2000	R R	Populari I MI Contraction
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

September 21, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17082605 Quote ID: B3997

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 11 samples for Texas Municipal Power Agency on 8/25/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17082605-001	SSP MW-2	08/24/17 9:30 08/25/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17082605-003	SSP MW-3	08/24/17 10:35 08/25/17	Ground Water	Same As Above
B17082605-004	AP MW-1D	08/24/17 11:00 08/25/17	Ground Water	Same As Above
B17082605-005	SSP MW-4	08/24/17 11:50 08/25/17	Ground Water	Same As Above
B17082605-006	AP MW-5	08/24/17 12:09 08/25/17	Ground Water	Same As Above
B17082605-007	AP MW-4	08/24/17 13:00 08/25/17	Ground Water	Same As Above
B17082605-008	EQBK/SCM/082417	08/24/17 13:30 08/25/17	Ground Water	Same As Above
B17082605-009	EQBK-BJG-082417	08/24/17 13:35 08/25/17	Ground Water	Same As Above
B17082605-010	DUP-2	08/24/17 0:00 08/25/17	Ground Water	Same As Above
B17082605-011	DUP-3	08/24/17 0:00 08/25/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: Texas Municipal Power Agency

Project: CCRR Report Date: 09/21/17

Work Order: B17082605 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082605-001 Client Sample ID: SSP MW-2

Report Date: 09/21/17 **Collection Date:** 08/24/17 09:30 **DateReceived:** 08/25/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.80	pCi/L				E903.0	09/18/17 11:23 / eli-ca
Radium 226 precision (±)	0.19	pCi/L				E903.0	09/18/17 11:23 / eli-ca
Radium 226 MDC	0.16	pCi/L				E903.0	09/18/17 11:23 / eli-ca
Radium 228	3.5	pCi/L				RA-05	09/12/17 12:04 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	09/12/17 12:04 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/12/17 12:04 / eli-ca
Radium 226 + Radium 228	4.3	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-002 Client Sample ID: AP MW-6

Report Date: 09/21/17 Collection Date: 08/24/17 09:42

DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result U	Inits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.64 p0	Ci/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 precision (±)	0.17 p(Ci/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 MDC	0.15 p(Ci/L				E903.0	09/18/17 12:53 / eli-ca
Radium 228	0.70 p0	Ci/L	U			RA-05	09/12/17 13:37 / eli-ca
Radium 228 precision (±)	1.2 p0	Ci/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 MDC	2.0 p0	Ci/L				RA-05	09/12/17 13:37 / eli-ca
Radium 226 + Radium 228	1.3 p0	Ci/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2 p(Ci/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.0 p0	Ci/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082605-003 Client Sample ID: SSP MW-3

Report Date: 09/21/17 **Collection Date:** 08/24/17 10:35 **DateReceived:** 08/25/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	7.2	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 precision (±)	1.4	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 MDC	0.15	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 228	25	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 precision (±)	4.7	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 226 + Radium 228	32.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	4.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MEC Military Control IIIIII.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-004 Client Sample ID: AP MW-1D

Report Date: 09/21/17 Collection Date: 08/24/17 11:00 DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result l	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.52 p	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 precision (±)	0.16 p	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 MDC	0.15 p	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 228	1.3 p	pCi/L	U			RA-05	09/12/17 13:37 / eli-ca
Radium 228 precision (±)	1.2 p	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 MDC	2.0 p	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 226 + Radium 228	1.8 p	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2 p	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.0 p	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR** Lab ID: B17082605-005

Client Sample ID: SSP MW-4

Report Date: 09/21/17 Collection Date: 08/24/17 11:50 DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.3	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 precision (±)	0.34	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 MDC	0.15	pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 228	1.4	pCi/L	U			RA-05	09/12/17 13:37 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 MDC	2.0	pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 226 + Radium 228	2.7	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.0	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-006

Client Sample ID: AP MW-5

Report Date: 09/21/17

Collection Date: 08/24/17 12:09

DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL						•
	4.0.00#					
Radium 226	1.2 pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 precision (±)	0.31 pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 226 MDC	0.13 pCi/L				E903.0	09/18/17 12:53 / eli-ca
Radium 228	2.2 pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 precision (±)	1.1 pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 228 MDC	1.8 pCi/L				RA-05	09/12/17 13:37 / eli-ca
Radium 226 + Radium 228	3.4 pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2 pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.8 pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR** Lab ID: B17082605-007

Client Sample ID: AP MW-4

Report Date: 09/21/17 Collection Date: 08/24/17 13:00

DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.85	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 precision (±)	0.19	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 228	1.7	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 precision (±)	0.86	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 MDC	1.5	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 226 + Radium 228	2.6	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Matrix: Ground Water



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-008 Client Sample ID: EQBK/SCM/082417

Report Date: 09/21/17 Collection Date: 08/24/17 13:30

DateReceived: 08/25/17

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.16	pCi/L	U			E903.0	09/19/17 13:06 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 MDC	0.31	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 228	1.0	pCi/L	U			RA-05	09/14/17 09:09 / eli-ca
Radium 228 precision (±)	1.5	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 226 + Radium 228	1.2	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-009 Client Sample ID: EQBK-BJG-082417

Report Date: 09/21/17 Collection Date: 08/24/17 13:35

DateReceived: 08/25/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.02	pCi/L	U			E903.0	09/19/17 13:06 / eli-ca
Radium 226 precision (±)	0.15	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 MDC	0.25	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 228	0.97	pCi/L	U			RA-05	09/14/17 09:09 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 226 + Radium 228	1	pCi/L	U			A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

Lab ID: B17082605-010

Client Sample ID: DUP-2

Report Date: 09/21/17
Collection Date: 08/24/17
DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DADIONIICI IDEC. TOTAL							<u> </u>
RADIONUCLIDES - TOTAL		-					
Radium 226	5.4	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 precision (±)	1.1	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 228	27	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 precision (±)	5.0	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 226 + Radium 228	32.6	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	5.2	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Page 12 of 18

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17082605-011

Client Sample ID: DUP-3

Report Date: 09/21/17 Collection Date: 08/24/17

DateReceived: 08/25/17

Matrix: Ground Water

Analyses	Result I	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
							· · · · · · · · · · · · · · · · · · ·
RADIONUCLIDES - TOTAL							
Radium 226	0.99	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 precision (±)	0.22	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	09/19/17 13:06 / eli-ca
Radium 228	4.5	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 precision (±)	1.2	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 228 MDC	1.4	pCi/L				RA-05	09/14/17 09:09 / eli-ca
Radium 226 + Radium 228	5.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	09/20/17 17:14 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.





Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 09/20/17 Project: CCRR Work Order: B17082605

Analyte	Result	Units	RL %REC	Low Limit	High Limit	RPD	RPDLimit Qual
Method: E903.0							Batch: RA226-8624
Lab ID: LCS-RA226-8624	Laboratory Co	ntrol Sample		Run: G542	M_170904C		09/19/17 13:06
Radium 226	9.7	pCi/L	95	80	120		
Lab ID: MB-RA226-8624	Method Blank			Run: G542	M_170904C		09/19/17 13:06
Radium 226	0.2	pCi/L					U
Radium 226 precision (±)	0.1	pCi/L					
Radium 226 MDC	0.2	pCi/L					
Lab ID: B17082605-007AMS	Sample Matrix	Spike		Run: G542	M_170904C		09/19/17 13:06
Radium 226	17	pCi/L	82	70	130		
Lab ID: B17082605-007AMSD	Sample Matrix	Spike Duplicate		Run: G542	M_170904C		09/19/17 13:06
Radium 226	18	pCi/L	85	70	130	2.3	20
Method: E903.0							Batch: RA226-8623
Lab ID: LCS-RA226-8623	Laboratory Co	ntrol Sample		Run: G542	M-2_170904B		09/18/17 11:23
Radium 226	11	pCi/L	105	80	120		
Lab ID: MB-RA226-8623	Method Blank			Run: G542	M-2_170904B		09/18/17 11:23
Radium 226	0.07	pCi/L					U
Radium 226 precision (±)	0.1	pCi/L					
Radium 226 MDC	0.2	pCi/L					
Lab ID: C17080731-002CMS	Sample Matrix	Spike		Run: G542	M-2_170904B		09/18/17 11:23
Radium 226	29	pCi/L	122	70	130		
Lab ID: C17080731-002CMSD	Sample Matrix	Spike Duplicate		Run: G542	M-2_170904B		09/18/17 11:23
Radium 226	26	pCi/L	105	70	130	12	20

RL - Analyte reporting limit. MDC - Minimum detectable concentration ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration





Prepared by Casper, WY Branch

Client: Texas Municipal Power Agency **Report Date:** 09/20/17 Project: CCRR Work Order: B17082605

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA	228-5584
Lab ID: LCS-228-RA226-8623	Laboratory Co	ntrol Sample			Run: TENN	NELEC-3_170904	4A	09/12	2/17 12:04
Radium 228	11	pCi/L		100	80	120			
Lab ID: MB-RA226-8623	Method Blank				Run: TENN	NELEC-3_170904	4A	09/12	2/17 12:04
Radium 228	1.0	pCi/L							U
Radium 228 precision (±)	1	pCi/L							
Radium 228 MDC	2	pCi/L							
Lab ID: C17080731-003CMS	Sample Matrix	Spike			Run: TENN	NELEC-3_170904	4A	09/12	2/17 12:04
Radium 228	24	pCi/L		105	70	130			
Lab ID: C17080731-003CMSD	Sample Matrix	Spike Duplicate			Run: TENN	NELEC-3_170904	4A	09/12	2/17 12:04
Radium 228	22	pCi/L		95	70	130	8.2	20	
Method: RA-05								Batch: RA	228-5585
Lab ID: LCS-228-RA226-8624	Laboratory Co	ntrol Sample			Run: TENN	NELEC-3_170904	4C	09/14	/17 09:09
Radium 228	9.9	pCi/L		96	80	120			
Lab ID: MB-RA226-8624	Method Blank				Run: TENN	NELEC-3_170904	4C	09/14	/17 09:09
Radium 228	0.4	pCi/L							U
Radium 228 precision (±)	1.0	pCi/L							
Radium 228 MDC	2	pCi/L							
Lab ID: B17082605-008AMS	Sample Matrix	Spike			Run: TENN	NELEC-3_170904	4C	09/14	/17 09:09
Radium 228	20	pCi/L		94	70	130			
Lab ID: B17082605-008AMSD	Sample Matrix	Spike Duplicate			Run: TENN	NELEC-3_170904	4C	09/14	/17 09:09
Radium 228	19	pCi/L		88	70	130	5.8	20	

RL - Analyte reporting limit. MDC - Minimum detectable concentration ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Work Order Receipt Checklist

Texas Municipal Power Agency

B17082605

Login completed by:	Gina McCartney		Date I	Received: 8/25/2017
Reviewed by:	BL2000\tedwards		Red	ceived by: se
Reviewed Date:	8/31/2017		Carr	rier name: FedEx
Shipping container/cooler in	good condition?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🗸	No 🗌	
Chain of custody signed whe	n relinquished and received?	Yes 🗸	No 🗌	
Chain of custody agrees with	sample labels?	Yes 🗹	No 🗌	
Samples in proper container/	bottle?	Yes 🔽	No 🗌	
Sample containers intact?		Yes 🗹	No 🗌	
Sufficient sample volume for	indicated test?	Yes 🗹	No 🗌	
All samples received within h (Exclude analyses that are co such as pH, DO, Res Cl, Su	onsidered field parameters	Yes ✓	No 🗌	
Temp Blank received in all st	nipping container(s)/cooler(s)?	Yes √	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C On Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted 🔽
Water - pH acceptable upon	receipt?	Yes √	No 🗌	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The temperature of the sample(s) for shipping container 1 was 2.0°C, shipping container 2 was 1.1°C, shipping container 3 was 1.7°C and shipping container 4 was 4.4°C.



Chain of Custody & Analytical Request Record

Account Information (Billing information)		Report Information (if different than Account Information)	Commente
Company/Name Amc Foster Wheeler	٤	Company/Name	
Contact Grea Seifert		Contact	Mad Chom Onle
Phone 512-795-0366		Phone	X150000
3755 S. Capital	of TX Hwx. #375	Mailing Address	- STANDING WOLKE
		City, State, Zip	/ 1-se-8 ma
Email greg. Seifert Damectu. com		Email	
Receive Invoice Milard Copy MEmail Receive Report	teport ☐Hard Copy XEmail	Receive Report _Hard Copy DEmail	
Purchase Order Quote	Bottle Order	Special Report Confect In Section (confect laboratory) Other	
Project Information		Matrix Codes Analysis Reguested	
Project Name, PWSID, Permit, etc. (ent: TMPA	Project: CCRR	A - Air W- Water	All tumaround times are
Sampler Name B. Gieselnan	Sampler Phone 5/2-24/1-232/	S. Soils/	standard unless marked as RUSH.
	EPA/State Compliance XOes □ No		Energy Laboratories MUST be contacted orior to
MINING CLIENTS, please indicate sample type. "If ore has been processed or refined, call before sending. Byproduct 11 (e)2 material	pole type. call before sending. Unprocessed one (NOT cnound or refined)*	O. Other Dw. Omnking Call	RUSH sample submittal for charges and scheduling – See Instructions Page
I			-
Sample Identification (Name, Location, Interval, etc.)	Collection Date Time		Hana S
1 SSP MW-2	77	×	
2 AP MW-6	1 0942		
3 SSP MW-3	1035		
4 AP MW-1D	00//		
5 SSP MW-4	1//50		000
6 APMW-5	1209		200
7 APMW-4	/300		0001
" Fabk/Scm/oray17	/330		009
" EQBK-BJG-082417	/335		0000
10 DUP-2	→	> > >	6/01
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



Chain of Custody & Analytical Request Record

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Account Information (Billing information)	illing information)			Report Ir	nformation	I lif different t	Report Information (if different then Account Information	1	(Lage & ot	
Companyiname Amec Faster Wheeler	ter Wheeler			Company/Name	g g		ווסווו שומססטר ווחו	iation)		comments	ı
Contact Grea Seifert				Contact					_		
Phone 513-795-03				Рһопе	 						
Mailing Address 3755 S. Capital	<u> </u>	1 of TX HWY, #375	15	Mailing Address	SS						
City, State, Zip Austin, TX 75704	X 75704	,		City, State, Zip					=		
Email greg. Selfert @amecfus, com	amectus com			Email			!		_		
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Purchase Order Quote	(e)	Bottle Order		Special Report ormats:	o _≤] EDD/EDT (α	☐ EDD/EDT (contact laboratory) □	□ Other			
Project Information	n.			Matrix Codes							
				A - Air			Analysis Requested	equested			Γ
Project Name, PWSID, Permit, etc. (//entiTMP/ Project: CCRR	Client & TMPA	Project: Co	SRR	W- Water				_	_	All turnaround times are	
Sampler Name Brian Gieselman		Sampler Phone 5/2-24/1-232	-2321	S Solids	T	8				startuard unless marked as RUSH.	
Sample Origin State	EPA/State Co	EPA/State Compliance X Nes	es 🗆 No	B - Bioassay		9 -3				Energy Laboratories	
fined,	mple type. call before sending. □ Unprocessed ore (NOT ground or refined)*	OT ground or re	(lued)*	O - Other DW . Water	edul	eduli			sched	RUSH sample submittal for charges and scheduling –	
Sample Identification	ication	Colle		Number of Matrix Containers (See Codes		12S				-10	
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

September 14, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17090189

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 8 samples for Texas Municipal Power Agency on 9/5/2017 for analysis.

Lab ID Client Sample ID Collect Date Receive Date Matrix Test

B17090189-004 MNW-18 08/31/17 1 :45 09/05/17 Ground Water Metals by ICP/ICPMS, Tot. Rec.

Quote ID: B3997

				Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved
B17090189-003 EQB	K/SCM/083117 08/31/17	12:30 09/05/17	Ground Water S	ame As Above
B17090189-006 SFL I	MW-7 08/31/1	7 18:25 09/05/17	Ground Water	Same As Above
B17090189-007 MN	W-15 08/31/1	7 19:30 09/05/17	Ground Water	Same As Above
B17090189-008 DUF	P-1 08/31/1 ²	7 0:00 09/05/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090189-003 Client Sample ID: EQBK/SCM/083117

Report Date: 09/14/17 Collection Date: 08/31/17 12:30 DateReceived: 09/05/17

Matrix: Ground Water

Austra			.	D.	MCL/	Madbad	Assolution Date / Date
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/08/17 20:34 / slf
Magnesium	ND	mg/L		1		E200.7	09/08/17 20:34 / slf
Potassium	ND	mg/L		1		E200.7	09/08/17 20:34 / slf
Sodium	ND	mg/L		1		E200.7	09/08/17 20:34 / slf
PHYSICAL PROPERTIES							
oH	6.1	s.u.	Н	0.1		A4500-H B	09/05/17 15:29 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	09/06/17 14:57 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	09/08/17 07:43 / cjm
Sulfate	ND	mg/L		1		E300.0	09/08/17 07:43 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	09/08/17 12:35 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.7	09/08/17 20:34 / slf
rsenic	ND	mg/L		0.01		E200.8	09/09/17 05:07 / rlh
Barium	ND	mg/L		0.01		E200.7	09/08/17 20:34 / slf
Beryllium	ND	mg/L		0.001		E200.7	09/08/17 20:34 / slf
Boron	ND	mg/L		0.05		E200.7	09/08/17 20:34 / slf
Cadmium	ND	mg/L		0.01		E200.7	09/08/17 20:34 / slf
Chromium	ND	mg/L		0.01		E200.7	09/08/17 20:34 / slf
Cobalt	ND	mg/L		0.02		E200.7	09/08/17 20:34 / slf
ead	ND	mg/L		0.01		E200.8	09/09/17 05:07 / rlh
ithium	ND	mg/L		0.01		E200.7	09/08/17 20:34 / slf
1ercury	ND	mg/L		0.001		E245.1	09/07/17 13:46 / jag
1olybdenum	ND	mg/L		0.05		E200.7	09/08/17 20:34 / slf
Selenium	ND	mg/L		0.01		E200.8	09/09/17 05:07 / rlh
Гhallium	ND	mg/L		0.01		E200.8	09/09/17 05:07 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090189-004

Client Sample ID: MNW-18

Report Date: 09/14/17 Collection Date: 08/31/17 13:45

DateReceived: 09/05/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	444	mg/L		1		E200.7	09/08/17 06:49 / slf
Magnesium	71	mg/L		1		E200.7	09/08/17 06:49 / slf
Potassium	37	mg/L		1		E200.7	09/08/17 06:49 / slf
Sodium	735	mg/L		1		E200.7	09/08/17 06:49 / slf
PHYSICAL PROPERTIES							
Н	6.9	s.u.	Н	0.1		A4500-H B	09/05/17 15:31 / pjw
Solids, Total Dissolved TDS @ 180 C	4020	mg/L	D	40		A2540 C	09/06/17 14:57 / rik
NORGANICS							
Chloride	521	mg/L	D	6		E300.0	09/08/17 08:02 / cjm
Sulfate	2120	mg/L	D	20		E300.0	09/08/17 08:02 / cjm
Fluoride	0.2	mg/L		0.1		A4500-F C	09/08/17 12:38 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.05		E200.8	09/07/17 15:50 / rlh
Arsenic	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Barium	0.05	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Beryllium	ND	mg/L		0.001		E200.7	09/08/17 06:49 / slf
Boron	0.44	mg/L		0.05		E200.7	09/08/17 06:49 / slf
Cadmium	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Chromium	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Cobalt	ND	mg/L		0.02		E200.8	09/07/17 15:50 / rlh
∟ead	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Lithium	0.40	mg/L	D	0.04		E200.7	09/08/17 06:49 / slf
Mercury	ND	mg/L		0.001		E245.1	09/06/17 14:23 / jag
Molybdenum	ND	mg/L		0.05		E200.8	09/07/17 15:50 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh
Thallium	ND	mg/L		0.01		E200.8	09/07/17 15:50 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090189-006 Client Sample ID: SFL MW-7

Report Date: 09/14/17 Collection Date: 08/31/17 18:25 DateReceived: 09/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	628	mg/L		1		E200.7	09/08/17 06:56 / slf
Magnesium	98	mg/L		1		E200.7	09/08/17 06:56 / slf
Potassium	46	mg/L		1		E200.7	09/08/17 06:56 / slf
Sodium	1200	mg/L		1		E200.7	09/08/17 06:56 / slf
PHYSICAL PROPERTIES							
Н	6.7	s.u.	Н	0.1		A4500-H B	09/05/17 15:36 / pjw
Solids, Total Dissolved TDS @ 180 C	6650	mg/L	D	90		A2540 C	09/06/17 14:57 / rik
NORGANICS							
Chloride	2770	mg/L	D	6		E300.0	09/08/17 08:41 / cjm
Sulfate	768	mg/L	D	20		E300.0	09/08/17 08:41 / cjm
luoride	ND	mg/L		0.1		A4500-F C	09/08/17 12:43 / cjm
METALS, TOTAL RECOVERABLE							
antimony	ND	mg/L		0.05		E200.8	09/07/17 16:07 / rlh
arsenic	ND	mg/L		0.01		E200.8	09/07/17 16:07 / rlh
arium	0.03	mg/L		0.01		E200.7	09/08/17 06:56 / slf
eryllium	ND	mg/L		0.001		E200.8	09/08/17 20:21 / rlh
Soron	0.70	mg/L		0.05		E200.7	09/08/17 06:56 / slf
admium	ND	mg/L		0.01		E200.7	09/08/17 06:56 / slf
Chromium	ND	mg/L		0.01		E200.8	09/07/17 16:07 / rlh
Cobalt	ND	mg/L		0.02		E200.8	09/07/17 16:07 / rlh
ead	ND	mg/L		0.01		E200.8	09/07/17 16:07 / rlh
ithium	0.40	mg/L	D	0.04		E200.7	09/08/17 06:56 / slf
Mercury (1997)	ND	mg/L		0.001		E245.1	09/06/17 14:31 / jag
lolybdenum	ND	mg/L		0.05		E200.8	09/07/17 16:07 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/07/17 16:07 / rlh
Гhallium	ND	mg/L		0.01		E200.8	09/07/17 16:07 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Matrix: Ground Water

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR

B17090189-007 Lab ID:

Client Sample ID: MNW-15

Report Date: 09/14/17 Collection Date: 08/31/17 19:30

DateReceived: 09/05/17

MCL/ QCL **Analyses Result Units** Qualifiers RL Method Analysis Date / By **MAJOR IONS** Calcium 264 mg/L 1 E200.7 09/08/17 20:51 / slf Magnesium 52 mg/L 1 E200.7 09/08/17 20:51 / slf Potassium 26 mg/L 1 E200.7 09/08/17 20:51 / slf Sodium 434 mg/L D 2 E200.7 09/08/17 20:51 / slf **PHYSICAL PROPERTIES** 3.6 s.u. 09/05/17 15:39 / pjw Н 0.1 A4500-H B рΗ Solids, Total Dissolved TDS @ 180 C 09/06/17 14:57 / rik 2700 mg/L D 40 A2540 C **INORGANICS** Chloride 721 mg/L D 3 E300.0 09/08/17 09:39 / cjm Sulfate 1260 mg/L D 9 E300.0 09/08/17 09:39 / cjm A4500-F C 09/08/17 12:51 / cjm Fluoride 0.5 mg/L 0.1 **METALS, TOTAL RECOVERABLE** Antimony ND mg/L 0.05 E200.8 09/09/17 05:27 / rlh Arsenic ND mg/L 0.01 E200.8 09/09/17 05:27 / rlh 0.02 mg/L Barium 0.01 E200.7 09/08/17 20:51 / slf Beryllium 0.073 mg/L 0.001 E200.7 09/08/17 20:51 / slf 9.43 mg/L 0.05 E200.7 09/08/17 20:51 / slf Boron 0.09 mg/L 0.01 Cadmium E200.7 09/08/17 20:51 / slf 09/08/17 20:51 / slf Chromium ND mg/L 0.01 E200.7 D Cobalt 0.29 mg/L 0.03 E200.7 09/08/17 20:51 / slf Lead 0.01 mg/L 0.01 E200.8 09/09/17 05:27 / rlh Lithium D 0.02 0.05 mg/L E200.7 09/08/17 20:51 / slf Mercury ND mg/L 0.001 E245.1 09/07/17 13:48 / jag Molybdenum ND mg/L 0.05 E200.7 09/08/17 20:51 / slf Selenium ND mg/L 0.01 E200.8 09/09/17 05:27 / rlh Thallium ND mg/L 0.01 E200.8 09/09/17 05:27 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Report Date: 09/14/17

Collection Date: 08/31/17

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090189-008

DateReceived: 09/05/17 Client Sample ID: DUP-1 Matrix: Ground Water

					MCL/	
Analyses	Result	Units	Qualifiers	RL	QCL Method	Analysis Date / By
MAJOR IONS						
Calcium	644	mg/L		1	E200.7	09/08/17 07:00 / slf
Magnesium	101	•		1	E200.7	09/08/17 07:00 / slf
Potassium	46	mg/L		1	E200.7	09/08/17 07:00 / slf
Sodium		mg/L		1	E200.7	09/08/17 07:00 / slf
PHYSICAL PROPERTIES						
рΗ	6.7	s.u.	Н	0.1	A4500-H B	09/05/17 15:42 / pjw
Solids, Total Dissolved TDS @ 180 C	6490	mg/L	D	90	A2540 C	09/06/17 14:57 / rik
INORGANICS						
Chloride	2700	mg/L	D	6	E300.0	09/08/17 09:59 / cjm
Sulfate	785	mg/L	D	20	E300.0	09/08/17 09:59 / cjm
Fluoride	ND	mg/L		0.1	A4500-F C	09/08/17 12:54 / cjm
METALS, TOTAL RECOVERABLE						
Antimony	ND	mg/L		0.05	E200.8	09/07/17 16:10 / rlh
Arsenic	ND	mg/L		0.01	E200.8	09/07/17 16:10 / rlh
Barium	0.03	mg/L		0.01	E200.7	09/08/17 07:00 / slf
Beryllium	ND	mg/L		0.001	E200.7	09/08/17 07:00 / slf
Boron	0.71	mg/L		0.05	E200.7	09/08/17 07:00 / slf
Cadmium	ND	mg/L		0.01	E200.7	09/08/17 07:00 / slf
Chromium	ND	mg/L		0.01	E200.8	09/07/17 16:10 / rlh
Cobalt	ND	mg/L		0.02	E200.8	09/07/17 16:10 / rlh
Lead	ND	mg/L		0.01	E200.8	09/07/17 16:10 / rlh
_ithium	0.39	mg/L	D	0.04	E200.7	09/08/17 07:00 / slf
Mercury	ND	mg/L		0.001	E245.1	09/06/17 14:33 / jag
Molybdenum	ND	mg/L		0.05	E200.8	09/07/17 16:10 / rlh
Selenium	ND	mg/L		0.01	E200.8	09/07/17 16:10 / rlh
Гhallium	ND	mg/L		0.01	E200.8	09/07/17 16:10 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Report Date: 09/13/17

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: CCRR Work Order: B17090189

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch	n: 113392
Lab ID: MB-1133	92 Me	thod Blank				Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	ND	mg/L	4						
Lab ID: LCS-113	392 Lal	ooratory Con	trol Sampl	le		Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	1000	mg/L	10	99	90	110			
Lab ID: B170901	89-001A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	3580	mg/L	39				1.2	5	
Lab ID: B170901	89-002A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	4760	mg/L	93				1.7	5	
Lab ID: B170901	89-003A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C etween the analytical resu	ND	mg/L	10	ha ranarti	ing limit the D	DD verience is not as	naidara	5 d significant	
	•	•		iplicate is less than t	пе героп			nsidere	•	47 44 57
		mple Duplica		40		Run: BAL #	SD-15_170906C	0.4		17 14:57
Solids, Total Dissolve	d 1DS @ 180 C	4020	mg/L	40				0.1	5	
Lab ID: B170901	89-005A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	8720	mg/L	92				1.5	5	
Lab ID: B170901	89-006A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve		6490	mg/L	93			_	2.4	5	
Lab ID: B1709018	89-007A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	2710	mg/L	39				0.5	5	
Lab ID: B170901	89-008A DUP Sa	mple Duplica	ate			Run: BAL #	SD-15_170906C		09/06/	17 14:57
Solids, Total Dissolve	d TDS @ 180 C	6460	mg/L	91				0.5	5	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/13/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C							Analytic	al Run:	MAN-TECH_	170908A
Lab ID:	ICV	Initia	al Calibratio	on Verification Sta	ndard					09/08/	17 12:11
Fluoride			1.01	mg/L	0.10	101	90	110			
Method:	A4500-F C									Batch:	R286354
Lab ID:	MBLK	Met	hod Blank				Run: MAN-	TECH_170908A		09/08/	17 12:08
Fluoride			ND	mg/L	0.02						
Lab ID:	LFB	Lab	oratory Fort	tified Blank			Run: MAN-	TECH_170908A		09/08/	17 12:14
Fluoride			1.02	mg/L	0.10	102	90	110			
Lab ID:	B17090189-001AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170908A		09/08/	17 12:22
Fluoride			1.16	mg/L	0.10	101	80	120			
Lab ID:	B17090189-001AMS	D Sam	ple Matrix	Spike Duplicate			Run: MAN-	TECH_170908A		09/08/	17 12:24
Fluoride			1.15	mg/L	0.10	100	80	120	0.9	10	
Lab ID:	B17090264-002AMS	Sam	ple Matrix	Spike			Run: MAN-	TECH_170908A		09/08/	17 13:15
Fluoride			1.39	mg/L	0.10	101	80	120			
Lab ID:	B17090264-002AMS	D Sam	nple Matrix	Spike Duplicate			Run: MAN-	TECH_170908A		09/08/	17 13:17
Fluoride			1.38	mg/L	0.10	100	80	120	0.7	10	



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/13/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PF	ISC _101-B_	170905A
Lab ID:	pH 8	Initia	al Calibratio	n Verificat	tion Standard					09/05/	17 08:37
рН			7.97	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R286053
Lab ID:	B17090189-001ADU	P Sam	nple Duplica	ate			Run: PHSC	_101-B_1709	05A	09/05/	17 15:23
рН			6.81	s.u.	0.10				0.0	3	

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/13/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC N	IETROHM 1_	_170907A
Lab ID:	ICV	2 In	itial Calibratio	on Verification Sta	ndard					09/07/	17 15:48
Chloride			2.21	mg/L	1.0	98	90	110			
Sulfate			9.01	mg/L	1.0	100	90	110			
Method:	E300.0									Batch:	R286334
Lab ID:	ICB	2 M	ethod Blank				Run: IC ME	TROHM 1_170	0907A	09/07/	/17 16:07
Chloride			ND	mg/L	0.006						
Sulfate			ND	mg/L	0.02						
Lab ID:	LFB	2 La	aboratory For	tified Blank			Run: IC ME	TROHM 1_170	0907A	09/07/	/17 16:27
Chloride			10.5	mg/L	1.0	105	90	110			
Sulfate			30.9	mg/L	1.0	103	90	110			
Lab ID:	B17090021-002AMS	2 Sa	ample Matrix	Spike			Run: IC ME	TROHM 1_170	0907A	09/07/	/17 17:25
Chloride			234	mg/L	1.0	98	90	110			
Sulfate			343	mg/L	1.8	104	90	110			
Lab ID:	B17090021-002AMSE) 2 Sa	ample Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0907A	09/07/	/17 17:44
Chloride			234	mg/L	1.0	98	90	110	0.1	20	
Sulfate			344	mg/L	1.8	104	90	110	0.2	20	
Lab ID:	B17090189-002AMS	2 Sa	ample Matrix	Spike			Run: IC ME	TROHM 1_170	0907A	09/08/	/17 07:04
Chloride			3140	mg/L	6.1	96	90	110			E
Sulfate			4100	mg/L	18	106	90	110			
Lab ID:	B17090189-002AMSE) 2 Sa	ample Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0907A	09/08/	/17 07:23
Chloride			3130	mg/L	6.1	95	90	110	0.3	20	Ε
Sulfate			4090	mg/L	18	106	90	110	0.2	20	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7							Anal	ytical Ru	n: ICP203-B_	_170907A
Lab ID:	ICV	9 Co	ntinuing Cal	ibration Verifi	cation Standa	rd				09/07/	17 14:45
Barium			2.52	mg/L	0.10	101	95	105			
Beryllium			1.24	mg/L	0.010	99	95	105			
Boron			2.48	mg/L	0.10	99	95	105			
Cadmium			2.42	mg/L	0.010	97	95	105			
Calcium			25.8	mg/L	1.0	103	95	105			
Lithium			1.29	mg/L	0.10	104	95	105			
Magnesiun	n		25.6	mg/L	1.0	102	95	105			
Potassium			25.7	mg/L	1.0	103	95	105			
Sodium			25.8	mg/L	1.0	103	95	105			
Method:	E200.7									Batch	n: 113363
Lab ID:	MB-113363	10 Me	thod Blank				Run: ICP20	3-B_170907A		09/08/	17 05:49
Barium			ND	mg/L	0.0005			_			
Beryllium			ND	mg/L	0.0001						
Boron			ND	mg/L	0.003						
Cadmium			ND	mg/L	0.0010						
Calcium			ND	mg/L	0.08						
Lithium			ND	mg/L	0.004						
Magnesiun	n		ND	mg/L	0.01						
Potassium			ND	mg/L	0.07						
Sodium			ND	mg/L	0.03						
Magnesiun	m, meq		ND	meq/L	0.001						
Lab ID:	LCS-113363	9 Lat	oratory Cor	ntrol Sample			Run: ICP20	3-B_170907A		09/08/	17 05:53
Barium			0.475	mg/L	0.050	95	85	115			
Beryllium			0.246	mg/L	0.0010	99	85	115			
Boron			0.455	mg/L	0.050	91	85	115			
Cadmium			0.244	mg/L	0.0010	98	85	115			
Calcium			24.9	mg/L	1.0	100	85	115			
Lithium			0.479	mg/L	0.10	96	85	115			
Magnesiun	n		24.9	mg/L	1.0	100	85	115			
Potassium			24.5	mg/L	1.0	98	85	115			
Sodium			24.1	mg/L	1.0	96	85	115			
Lab ID:	B17090189-001BMS3	9 Sai	mple Matrix	Spike			Run: ICP20	3-B_170907A		09/08/	17 06:38
Barium			0.578	mg/L	0.050	103	70	130			
Beryllium			0.268	mg/L	0.0014	106	70	130			
Boron			1.34	mg/L	0.050	121	70	130			
Cadmium			0.248	mg/L	0.0099	99	70	130			
Calcium			446	mg/L	1.0		70	130			Α
Lithium			1.09	mg/L	0.10	127	70	130			
Magnesiun	n		89.6	mg/L	1.0	125	70	130			
•			75.8	mg/L	1.0	131	70	130			S
Potassium											

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency Report Date: 09/14/17 Project: CCRR Work Order: B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 113363
Lab ID:	B17090189-001BMSI	D 9 San	nple Matrix	Spike Duplicate			Run: ICP20	3-B_170907A		09/08/	17 06:42
Barium			0.566	mg/L	0.050	101	70	130	2.1	20	
Beryllium			0.258	mg/L	0.0014	102	70	130	3.8	20	
Boron			1.28	mg/L	0.050	109	70	130	4.7	20	
Cadmium			0.252	mg/L	0.0099	101	70	130	1.7	20	
Calcium			420	mg/L	1.0		70	130	6.2	20	Α
Lithium			1.03	mg/L	0.10	115	70	130	5.6	20	
Magnesium	1		84.6	mg/L	1.0	105	70	130	5.8	20	
Potassium			72.1	mg/L	1.0	116	70	130	5.0	20	
Sodium			739	mg/L	4.2		70	130	5.6	20	Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Qual	RPDLimit	RPD	High Limit	Low Limit	%REC	RL	Units	Result	Count		Analyte
170908 <i>A</i>	n: ICP203-B_	lytical Rur	Anal							E200.7	Method:
17 11:47	09/08/				d	tion Standar	bration Verifica	ntinuing Cali	13 Cor	ICV	Lab ID:
			105	95	100	0.050	mg/L	2.50			Antimony
			105	95	101	0.10	mg/L	2.53			Barium
			105	95	99	0.010	mg/L	1.24			Beryllium
			105	95	100	0.10	mg/L	2.50			Boron
			105	95	98	0.010	mg/L	2.45			Cadmium
			105	95	100	1.0	mg/L	24.9			Calcium
			105	95	101	0.050	mg/L	2.53			Chromium
			105	95	98	0.020	mg/L	2.46			Cobalt
			105	95	99	0.10	mg/L	1.23			Lithium
			105	95	99	1.0	mg/L	24.6		ı	Magnesium
			105	95	101	0.10	mg/L	2.52		m	Molybdenu
			105	95	98	1.0	mg/L	24.4			Potassium
			105	95	98	1.0	mg/L	24.4			Sodium
: 113400	Batch									E200.7	Method:
17 20:20	09/08/		3-B_170908A	Run: ICP20				thod Blank	14 Met	MB-113400	Lab ID:
			_			0.02	mg/L	ND			Antimony
						0.0005	mg/L	ND			Barium
						0.0001	mg/L	ND			Beryllium
						0.003	mg/L	ND			Boron
						0.0010	mg/L	ND			Cadmium
						0.08	mg/L	ND			Calcium
						0.002	mg/L	ND			Chromium
						0.005	mg/L	ND			Cobalt
						0.004	mg/L	ND			Lithium
						0.01	mg/L	ND		1	Magnesium
						0.007	mg/L	ND		m	Molybdenu
						0.07	mg/L	ND			Potassium
						0.03	mg/L	ND			Sodium
						0.001	meq/L	ND		n, meq	Magnesium
17 20:30	09/08/		3-B_170908A	Run: ICP20			ntrol Sample	oratory Con	13 Lab	LCS-113400	Lab ID:
			115	85	103	0.021	mg/L	0.515			Antimony
			115	85	102	0.050	mg/L	0.511			Barium
			115	85	104	0.0010	mg/L	0.259			Beryllium
			115	85	94	0.050	mg/L	0.469			Boron
			115	85	104	0.0010	mg/L	0.259			Cadmium
			115	85	106	1.0	mg/L	26.5			Calcium
			115	85	102	0.0050	mg/L	0.512			Chromium
			115	85	103	0.0052	mg/L	0.514			Cobalt
			115	85	101	0.10	mg/L	0.507			Lithium
			115	85	108	1.0	mg/L	26.9		1	Magnesium
			115	85	103	0.0071	mg/L	0.517		m	Molybdenu
			115	85	102	1.0	mg/L	25.6			Potassium

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batcl	h: 113400
Lab ID:	LCS-113400	13 La	boratory Co	ntrol Sample			Run: ICP20	3-B_170908A		09/08/	17 20:30
Sodium			25.7	mg/L	1.0	103	85	115			
Lab ID:	B17090189-003BMS3	3 13 Sa	mple Matrix	Spike			Run: ICP20	3-B_170908A		09/08/	17 20:44
Antimony			0.493	mg/L	0.021	99	70	130			
Barium			0.494	mg/L	0.050	99	70	130			
Beryllium			0.249	mg/L	0.0010	99	70	130			
Boron			0.462	mg/L	0.050	92	70	130			
Cadmium			0.246	mg/L	0.0010	98	70	130			
Calcium			25.4	mg/L	1.0	102	70	130			
Chromium			0.493	mg/L	0.0050	99	70	130			
Cobalt			0.491	mg/L	0.0052	98	70	130			
Lithium			0.491	mg/L	0.10	98	70	130			
Magnesiur	n		26.1	mg/L	1.0	104	70	130			
Molybdenu	ım		0.516	mg/L	0.0071	103	70	130			
Potassium	1		24.8	mg/L	1.0	99	70	130			
Sodium			25.1	mg/L	1.0	98	70	130			
Lab ID:	B17090189-003BMSI	D 13 Sa	mple Matrix	Spike Duplicate			Run: ICP20	3-B_170908A		09/08/	17 20:48
Antimony			0.487	mg/L	0.021	97	70	130	1.3	20	
Barium			0.479	mg/L	0.050	96	70	130	3.0	20	
Beryllium			0.239	mg/L	0.0010	96	70	130	3.9	20	
Boron			0.447	mg/L	0.050	89	70	130	3.3	20	
Cadmium			0.234	mg/L	0.0010	94	70	130	4.7	20	
Calcium			24.5	mg/L	1.0	98	70	130	3.4	20	
Chromium			0.471	mg/L	0.0050	94	70	130	4.5	20	
Cobalt			0.471	mg/L	0.0052	94	70	130	4.2	20	
Lithium			0.482	mg/L	0.10	96	70	130	1.8	20	
Magnesiur	n		25.2	mg/L	1.0	101	70	130	3.5	20	
Molybdenu	ım		0.481	mg/L	0.0071	96	70	130	7.1	20	
Potassium	l		24.4	mg/L	1.0	98	70	130	1.5	20	
Sodium			24.7	mg/L	1.0	97	70	130	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count Resu	lt Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	Run: I	CPMS206-B_	_170907 <i>A</i>
Lab ID:	QCS	10 Initial Calib	ration Verifica	ation Standard					09/07/	17 13:33
Antimony		0.050)7 mg/L	0.050	101	90	110			
Arsenic		0.050)4 mg/L	0.0050	101	90	110			
Barium		0.050)9 mg/L	0.10	102	90	110			
Cadmium		0.026	88 mg/L	0.0010	107	90	110			
Chromium		0.053	31 mg/L	0.010	106	90	110			
Cobalt		0.052	24 mg/L	0.010	105	90	110			
Lead		0.051	I0 mg/L	0.010	102	90	110			
Molybdenu	ım	0.048	34 mg/L	0.0050	97	90	110			
Selenium		0.050)1 mg/L	0.0050	100	90	110			
Thallium		0.054	16 mg/L	0.10	109	90	110			
Method:	E200.8								Batch	h: 113363
Lab ID:	MB-113363	11 Method Bla	ank			Run: ICPM	S206-B_170907A	١	09/07/	17 15:09
Antimony		N	D mg/L	0.00004						
Arsenic		N	D mg/L	0.0002						
Barium		N	D mg/L	0.00005						
Beryllium		N	D mg/L	0.00008						
Cadmium		N	D mg/L	0.00003						
Chromium		0.000)2 mg/L	0.0001						
Cobalt		N	D mg/L	0.00002						
Lead		N	D mg/L	0.00003						
Molybdenu	ım	0.0000)4 mg/L	0.00003						
Selenium		0.000)5 mg/L	0.0004						
Thallium		N	D mg/L	7E-06						
Lab ID:	LCS-113363	11 Laboratory	Control Sam	ple		Run: ICPM	S206-B_170907 <i>A</i>		09/07/	17 15:29
Antimony		0.50)7 mg/L	0.0050	101	85	115			
Arsenic		0.48	33 mg/L	0.0010	97	85	115			
Barium		0.49	98 mg/L	0.010	100	85	115			
Beryllium		0.21	l4 mg/L	0.0010	86	85	115			
Cadmium		0.25	54 mg/L	0.0010	101	85	115			
Chromium		0.50)8 mg/L	0.0010	101	85	115			
Cobalt		0.50)7 mg/L	0.0010	101	85	115			
Lead		0.50)2 mg/L	0.0010	100	85	115			
Molybdenu	ım	0.47	75 mg/L	0.0050	95	85	115			
Selenium		0.49	91 mg/L	0.0050	98	85	115			
Thallium		0.52	22 mg/L	0.0010	104	85	115			
Lab ID:	B17090189-001BMS3	11 Sample Ma	atrix Spike			Run: ICPM	S206-B_170907A		09/07/	17 15:33
Antimony		0.51	I1 mg/L	0.0010	102	70	130			
Arsenic		0.49	98 mg/L	0.0010	99	70	130			
Barium		0.53	38 mg/L	0.050	96	70	130			
Beryllium		0.20)9 mg/L	0.0010	84	70	130			
Cadmium		0.25	52 mg/L	0.0010	101	70	130			
Chromium		0.51		0.0050	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	n: 113363
Lab ID:	B17090189-001BMS3	3 11 Sar	mple Matrix	Spike			Run: ICPM	S206-B_170907A		09/07/	17 15:33
Cobalt			0.477	mg/L	0.0050	95	70	130			
Lead			0.486	mg/L	0.0010	97	70	130			
Molybdenu	m		0.484	mg/L	0.0010	97	70	130			
Selenium			0.481	mg/L	0.0010	96	70	130			
Thallium			0.489	mg/L	0.00050	98	70	130			
Lab ID:	B17090189-001BMSI	D 11 Sar	mple Matrix	Spike Dup	licate		Run: ICPM	S206-B_170907A		09/07/	17 15:36
Antimony			0.500	mg/L	0.0010	100	70	130	2.3	20	
Arsenic			0.524	mg/L	0.0010	105	70	130	5.0	20	
Barium			0.532	mg/L	0.050	95	70	130	1.1	20	
Beryllium			0.202	mg/L	0.0010	81	70	130	3.6	20	
Cadmium			0.263	mg/L	0.0010	105	70	130	4.2	20	
Chromium			0.533	mg/L	0.0050	106	70	130	3.7	20	
Cobalt			0.470	mg/L	0.0050	94	70	130	1.6	20	
Lead			0.469	mg/L	0.0010	94	70	130	3.5	20	
Molybdenu	m		0.474	mg/L	0.0010	95	70	130	2.2	20	
Selenium			0.475	mg/L	0.0010	95	70	130	1.3	20	
Thallium			0.494	mg/L	0.00050	99	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

i roject.	JOI (1)							WOIR	Cidei	. 51703010	,,,
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS206-B_	_170908 <i>A</i>
Lab ID:	QCS	6 Init	ial Calibratio	on Verificati	on Standard					09/08/	17 12:27
Antimony			0.0516	mg/L	0.050	103	90	110			
Arsenic			0.0490	mg/L	0.0050	98	90	110			
Beryllium			0.0263	mg/L	0.0010	105	90	110			
Lead			0.0511	mg/L	0.010	102	90	110			
Selenium			0.0494	mg/L	0.0050	99	90	110			
Thallium			0.0484	mg/L	0.10	97	90	110			
Method:	E200.8									Batch	n: 113363
Lab ID:	MB-113363	11 Me	thod Blank				Run: ICPM	S206-B_170908A		09/08/	17 19:43
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			ND	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			0.0002	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			ND	mg/L	0.00003						
Molybdenu	m		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			ND	mg/L	7E-06						
Method:	E200.8									Batch	n: 113400
Lab ID:	MB-113400	5 Me	thod Blank				Run: ICPM	S206-B_170908A		09/09/	17 05:00
Antimony			ND	mg/L	0.00004			_			
Arsenic			ND	mg/L	0.0002						
Lead			0.00004	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			8E-06	mg/L	7E-06						
Lab ID:	LCS-113400	5 Lat	ooratory Cor	ntrol Sample	e		Run: ICPM	S206-B_170908A		09/09/	17 05:10
Antimony			0.546	mg/L	0.0050	109	85	115			
Arsenic			0.547	mg/L	0.0010	109	85	115			
Lead			0.532	mg/L	0.0010	106	85	115			
Selenium			0.515	mg/L	0.0050	103	85	115			
Thallium			0.536	mg/L	0.0010	107	85	115			
Lab ID:	B17090189-003BMS	3 5 Saı	mple Matrix	Spike			Run: ICPM	S206-B_170908A		09/09/	17 05:14
Antimony			0.544	mg/L	0.0010	109	70	130			
Arsenic			0.532	mg/L	0.0010	106	70	130			
Lead			0.501	mg/L	0.0010	100	70	130			
Selenium			0.510	mg/L	0.0010	102	70	130			
Thallium			0.516	mg/L	0.00050	103	70	130			
Lab ID:	B17090189-003BMS	D 5 Sai	mple Matrix	Spike Dupl	icate		Run: ICPM	S206-B_170908A		09/09/	17 05:17
Antimony			0.538	mg/L	0.0010	108	70	130	1.3	20	

Qualifiers:

RL - Analyte reporting limit.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	: 113400
Lab ID:	B17090189-003BMS	D 5 Sam	ple Matrix S	Spike Duplicate			Run: ICPMS	S206-B_170908A		09/09/1	17 05:17
Arsenic			0.532	mg/L	0.0010	106	70	130	0.1	20	
Lead			0.512	mg/L	0.0010	102	70	130	2.0	20	
Selenium			0.496	mg/L	0.0010	99	70	130	2.6	20	
Thallium			0.518	mg/L	0.00050	104	70	130	0.4	20	

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/14/17Project:CCRRWork Order:B17090189

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytica	Run:	HGCV202-B	_170906C
Lab ID:	ICV	Initia	l Calibratio	on Verificati	on Standard					09/06/	/17 13:42
Mercury			0.00190	mg/L	0.00010	95	90	110			
Method:	E245.1									Batc	h: 113365
Lab ID:	MB-113365	Meth	nod Blank				Run: HGCV	/202-B_170906C		09/06/	/17 14:06
Mercury			1E-06	mg/L	1E-06						
Lab ID:	LCS-113365	Labo	oratory Cor	ntrol Sample	Э		Run: HGCV	/202-B_170906C		09/06/	/17 14:08
Mercury			0.00193	mg/L	0.00010	97	85	115			
Lab ID:	B17090102-001AMS	Sam	ple Matrix	Spike			Run: HGCV	/202-B_170906C		09/06/	/17 14:14
Mercury			0.00189	mg/L	0.00010	95	70	130			
Lab ID:	B17090102-001AMSI	D Sam	ple Matrix	Spike Dupl	icate		Run: HGCV	/202-B_170906C		09/06/	/17 14:16
Mercury			0.00200	mg/L	0.00010	100	70	130	5.5	30	
Method:	E245.1							Analytica	l Run:	HGCV202-B	_170907A
Lab ID:	ICV	Initia	l Calibratio	on Verificati	on Standard					09/07/	/17 13:37
Mercury			0.00191	mg/L	0.00010	96	90	110			
Method:	E245.1									Batc	h: 113413
Lab ID:	MB-113413	Meth	nod Blank				Run: HGCV	/202-B_170907A		09/07/	/17 13:42
Mercury			9E-07	mg/L	1E-06						
Lab ID:	LCS-113413	Labo	oratory Cor	ntrol Sample	Э		Run: HGCV	/202-B_170907A		09/07/	/17 13:44
Mercury			0.00197	mg/L	0.00010	98	85	115			
Lab ID:	B17090268-001CMS	Sam	ple Matrix	Spike			Run: HGCV	/202-B_170907A		09/07/	/17 13:52
Mercury			0.00196	mg/L	0.00010	98	70	130			
Lab ID:	B17090268-001CMSI	D Sam	ple Matrix	Spike Dupl	icate		Run: HGCV	/202-B_170907A		09/07/	/17 13:54
Mercury			0.00197	mg/L	0.00010	99	70	130	0.4	30	

Qualifiers:

Work Order Receipt Checklist

Texas Municipal Power Agency

B17090189

Login completed by:	Gina McCartney		Date	Received: 9/5/2017
Reviewed by:	BL2000\cindy		Red	ceived by: qej
Reviewed Date:	9/6/2017		Carı	rier name: FedEx
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓
Chain of custody present?		Yes 🔽	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🔽	No 🗌	
Chain of custody agrees with	n sample labels?	Yes 🔽	No 🗌	
Samples in proper container	/bottle?	Yes 🗹	No 🗌	
Sample containers intact?		Yes 🗸	No 🗌	
Sufficient sample volume for	indicated test?	Yes √	No 🗌	
All samples received within h (Exclude analyses that are couch as pH, DO, Res CI, Su	onsidered field parameters	Yes √	No 🗌	
Temp Blank received in all si	hipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Applicable
Container/Temp Blank tempe	erature:	°C Melted Ice		
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted
Water - pH acceptable upon	receipt?	Yes [No 🗹	Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 16.7°C, shipping container 2 was 9.0°C and shipping container 3 was 14.2°C.

Samples EQBK/SCM/083117 and MNW-15 for Total Metals were preserved to pH <2 with 2 mL of nitric acid per 250 mL in the laboratory. In accordance with the Clean Water Act, these samples must be held for 24 hour prior to analysis.



Chain of Custody & Analytical Request Record

Account Information (Billing information)	Report Information of different them Account Information	
CompanyiName Amec Foster Wheeler	Company/Name	
Contact Grea Seitert	Contact	Samples EaBK/SCM/083117
Phone 512-795-0360	Phone	and MNW-15 do not
Mailing Address 3755 S. Capital of TX Hux. #375	Mailing Address	Contain HNOs preservative.
City, State, Zip Austin, TX 18704	City, State, Zip	
Email greg. Settert Damectus com	Email	14/1/aNa1/5/15 DX
Receive Invoice Adhard Copy Acmail Receive Report	X Email	Rod Chorn on this
Purchase Order Quote Bottle Order	Special Repositionnats:	work of or 9-5-17
Project Information	Matrix Codes Analysis Requested	
Project Name, PWSID, Permit, etc. Client: TMPA Project: CCRR	A - Air W- Water	All tumaround times are
Sampler Name S. Macon	S Solids S Solids	RUSH.
Sample Origin State TX EPA/State Compliance XYes		_
sample type. ed, call before	O Other O Ower Drinking DW Drinking DW Water Col	RUSH sample submittal for charges and scheduling – Charges and scheduling – See Instructions Page
Sample Identification Colle (Name, Location, Interval, etc.)	Collection Number of Matrix S	A 698
9/8	7	_
2 MNW-II		2000
3 EQBK/SCM/083117	1230	2001
•		600-
.]	1500	-00%
6 SFL MW-7	/825	900-
" MWW-15	1930	7007
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10		
Custody Relinquished by (print) Record MUST	omed Cillado	(K. Simature
Date/Time		Signature
Shipped By Cooler ID(s) Custody Seals Intact Y N C B Y N	ntact Receipt Temp Blank On toe Payment Type Amount N Y N CC Cash Check \$	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. mag be subcontracted to other certified beforatories in order to complete the analysis requested.

This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

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ANALYTICAL SUMMARY REPORT

October 04, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17090193 Quote ID: B3997

Project Name: CCRR

Energy Laboratories Inc Billings MT received the following 8 samples for Texas Municipal Power Agency on 9/5/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17090193-003 E	EQBK/SCM/083117	08/31/17 12:30 09/05/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17090193-004	MNW-18	08/31/17 13:45 09/05/17	Ground Water	Same As Above
B17090193-006	SFL MW-7	08/31/17 18:25 09/05/17	Ground Water	Same As Above
B17090193-007	MNW-15	08/31/17 19:30 09/05/17	Ground Water	Same As Above
B17090193-008	DUP-1	08/31/17 19:30 09/05/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: Texas Municipal Power Agency

Project: CCRR Report Date: 10/04/17

Work Order: B17090193 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090193-003 Client Sample ID: EQBK/SCM/083117

Report Date: 10/04/17 Collection Date: 08/31/17 12:30

Matrix: Ground Water

DateReceived: 09/05/17

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.22	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 precision (±)	0.17	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 228	0.12	pCi/L	U			RA-05	09/23/17 15:22 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 MDC	2.4	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 226 + Radium 228	0.3	pCi/L	U			A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090193-004

Client Sample ID: MNW-18

Report Date: 10/04/17

Collection Date: 08/31/17 13:45 DateReceived: 09/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.9	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 precision (±)	0.46	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 228	5.7	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 MDC	1.9	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 226 + Radium 228	7.6	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090193-006 Client Sample ID: SFL MW-7

Report Date: 10/04/17 Collection Date: 08/31/17 18:25 DateReceived: 09/05/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.77	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 precision (±)	0.20	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 MDC	0.17	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 228	0.61	pCi/L	U			RA-05	09/23/17 15:22 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 226 + Radium 228	1.4	pCi/L	U			A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090193-007

Client Sample ID: MNW-15

Report Date: 10/04/17 Collection Date: 08/31/17 19:30

DateReceived: 09/05/17

Matrix: Ground Water

	_				MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.37	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 precision (±)	0.16	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 MDC	0.19	pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 228	1.7	pCi/L				RA-05	09/23/17 13:46 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/23/17 13:46 / eli-ca
Radium 228 MDC	1.6	pCi/L				RA-05	09/23/17 13:46 / eli-ca
Radium 226 + Radium 228	2.1	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: **CCRR**

Lab ID: B17090193-008

Client Sample ID: DUP-1

Report Date: 10/04/17 Collection Date: 08/31/17 19:30

DateReceived: 09/05/17

Matrix: Ground Water

Analyses	Result Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Allalyses	Nesult Office	Qualifiers			Metriou	Analysis Date / By
RADIONUCLIDES - TOTAL						
Radium 226	0.74 pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 precision (±)	0.20 pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 226 MDC	0.17 pCi/L				E903.0	09/28/17 16:49 / eli-ca
Radium 228	2.3 pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 precision (±)	1.0 pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 228 MDC	1.9 pCi/L				RA-05	09/23/17 15:22 / eli-ca
Radium 226 + Radium 228	3.1 pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.0 pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.9 pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.





Prepared by Casper, WY Branch

Analyte	Result Units	RL %REC Low Limit High Limit RPI	D RPDLimit Qual
Method: E903.0			Batch: RA226-8657
Lab ID: MB-RA226-8657	Method Blank	Run: G542M-2_170918C	09/28/17 16:49
Radium 226	0.1 pCi/L		U
Radium 226 precision (±)	0.1 pCi/L		
Radium 226 MDC	0.2 pCi/L		
Lab ID: B17090193-002AMS	Sample Matrix Spike	Run: G542M-2_170918C	09/28/17 16:49
Radium 226	23 pCi/L	89 70 130	
Lab ID: B17090193-002AMSD	Sample Matrix Spike Duplicate	Run: G542M-2_170918C	09/28/17 16:49
Radium 226	25 pCi/L	97 70 130 8.3	3 20
Lab ID: LCS-RA226-8657	Laboratory Control Sample	Run: G542M-2_170918C	09/28/17 16:49
Radium 226	8.6 pCi/L	84 80 120	





Prepared by Casper, WY Branch

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual		
Method: RA-05								Batch: RA	228-5604		
Lab ID: LCS-228-RA226-8657	b ID: LCS-228-RA226-8657 Laboratory Control Sample				Run: TENNELEC-3_170918B						
Radium 228	8.5	pCi/L		84	80	120					
Lab ID: MB-RA226-8657	Method Blank				Run: TENN	NELEC-3_170918	3B	09/23	/17 13:46		
Radium 228	0.2	pCi/L							U		
Radium 228 precision (±)	1	pCi/L									
Radium 228 MDC	2	pCi/L									
Lab ID: B17090193-007AMS	Sample Matrix	Spike			Run: TENN	NELEC-3_170918	3B	09/23	/17 13:46		
Radium 228	24	pCi/L		90	70	130					
Lab ID: B17090193-007AMSD	Sample Matrix	Spike Duplicate			Run: TENN	NELEC-3_170918	3B	09/23	/17 13:46		
Radium 228	26	pCi/L		97	70	130	7.2	20			

Work Order Receipt Checklist

Texas Municipal Power Agency B17090193

Login completed by:	Gina McCartney		Date	Received: 9/5/2017			
Reviewed by:	BL2000\cindy		Re	eceived by: qej			
Reviewed Date:	9/6/2017		Cai	rrier name: FedEx			
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present			
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes √	No 🗌	Not Present			
Custody seals intact on all sample bottles?		Yes	No 🗌	Not Present ✓			
Chain of custody present?		Yes √	No 🗌				
Chain of custody signed whe	en relinquished and received?	Yes √	No 🗌				
Chain of custody agrees with	sample labels?	Yes √	No 🗌				
Samples in proper container/	bottle?	Yes √	No 🗌				
Sample containers intact?		Yes √	No 🗌				
Sufficient sample volume for	indicated test?	Yes √	No 🗌				
All samples received within h (Exclude analyses that are or such as pH, DO, Res Cl, Su	onsidered field parameters	Yes √	No 🗌				
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes √	No 🗌	Not Applicable			
Container/Temp Blank tempe	erature:	°C Melted Ice					
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted			
Water - pH acceptable upon	receipt?	Yes	No 🗹	Not Applicable			

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 16.7°C, shipping container 2 was 9.0°C and shipping container 3 was 14.2°C.

Samples WQBK/SCM/083117 and MNW-15 for Radio-Chemistry was received at pH >2. Nitric acid (8 mL) was added to both containers in the laboratory to preserve to pH <2.

Chain of Custody & Analytical Request Record

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RadOhem awalysu contain HNOs preseructive. Samples EaBK/Scn/083117 and MNW-15 do not All turnaround times are standard unless marked as RUSH. Month onthis i MUST be contacted prior to RUSH sample submittal for BIT090193-00 Page ____ of__ charges and scheduling -8 ğ See Instructions Page Energy Laboratories Comments Receipt Num See Attached Analysis Requested Report Information (if different than Account Information) □ LEVEL IV □ NELAC □ EDD/EDT (contact laboratory) □ Other LINGLE JANG Payment Type th Check Mady Received by (print Receive Report Utlend Copy DEmail <u>8</u> z გ≻ Special Report ormats Matrix (See Codes Above) Mailing Address Company/Name Matrix Codes City, State, Zip B - Bioassay V - Vegetation DW - Drinking Water Temp Blank Y N S - Soils/ Solids W- Water 0 - Other A-Air Signature Contact Phone Email Number of Containers 3 9-1- (1 Signature Receipt Temp 1230 1500 1345 **X**maii 0955 1825 930 02 Time EPA/State Compliance XYes □ No Project Name, PWSID, Permit, etc. Client: TMPA Project: CCRR Sampler Phone 5/2-795-0360 Collection ☐ Unprocessed ore (NOT ground or refined)* Receive Invoice Retard Copy NEmail Receive Report Chard Copy 11/12/8 Mailing Address 3755 S. Capital of TX Hwy. #375 **Bottle Order** Date Intact Y N Date/Time Email greg. Settert @ amectw.com MAGE Custody Seals
Y N C B CompanyiName Amec Foster Wheeler MINING CLIENTS, please indicate sample type.
If ore has been processed or refined, call before sending. Account Information (Billing information) City, State, Zip Austin, TX 78704 Sample Identification (Name, Location) interval, etc.) 711880/ 512-795-0360 ATMV C Quote Greg Seitert Cooler ID(s) Sampler Name S. Macon. Project Information □ Byproduct 11 (e)2 material EQBK/SCM, SFL MW-MNW-16 Relinquisher APMW-6 MNW-15 MNW-18 MNW-1 Sample Origin State DUP-1 Purchase Order Record MUST Shipped By be signed Custody Contact Phone

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

Amount \$

Cash

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EU-COC-12/16 v.1

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ANALYTICAL SUMMARY REPORT

December 15, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17090709 Quote ID: B3997 - CCRR

Project Name: TMPA CCRR

Energy Laboratories Inc Billings MT received the following 9 samples for Texas Municipal Power Agency on 9/11/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B17090709-001	SFL MW-7	09/07/17 10:	40 09/11/17	Ground Water	Metals by ICP/ICPMS, Tot. Rec. Mercury, Total Recoverable Fluoride Anions by Ion Chromatography pH Metals Preparation by EPA 200.2 Digestion, Mercury by CVAA Preparation for TDS Solids, Total Dissolved
B17090709-002	MNW-15	09/07/17 12:	00 09/11/17	Ground Water	Same As Above
B17090709-003	EQBK/SCM/090717	09/07/17 13:	00 09/11/17	Ground Water	Same As Above
B17090709-004	MNW-18	09/07/17 13:	55 09/11/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Texas Municipal Power Agency

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Revised Date: 12/15/17 **Report Date:** 09/20/17

Project: TMPA CCRR

Work Order: B17090709

CASE NARRATIVE

Revised Report 12/15/2017

CLIENT:

The reporting limits for the following analytes were lowered per request from Greg Seifert.

Analyte Original Reporting Limit (mg/L) Revised Reporting limit (mg/L)

 Antimony
 0.05
 0.006

 Cadmium
 0.01
 0.005

 Thallium
 0.01
 0.002

The report has been revised and replaces any previously issued report in its entirety.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR
Lab ID: B17090709-001
Client Sample ID: SFL MW-7

Revised Date: 12/15/17
Report Date: 09/20/17

Collection Date: 09/07/17 10:40

DateReceived: 09/11/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	613	mg/L		1		E200.7	09/14/17 05:06 / slf
Magnesium		mg/L		1		E200.7	09/14/17 05:06 / slf
Potassium		mg/L		1		E200.7	09/14/17 05:06 / slf
Sodium		mg/L	D	4		E200.7	09/14/17 05:06 / slf
PHYSICAL PROPERTIES							
рН	6.7	s.u.	Н	0.1		A4500-H B	09/11/17 15:06 / pjw
Solids, Total Dissolved TDS @ 180 C	6810	mg/L	D	90		A2540 C	09/12/17 10:49 / rik
INORGANICS							
Chloride	2820	mg/L	D	6		E300.0	09/17/17 01:13 / cjm
Sulfate	770	mg/L	D	20		E300.0	09/17/17 01:13 / cjm
Fluoride	ND	mg/L		0.1		A4500-F C	09/13/17 18:01 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	09/12/17 18:18 / rlh
Arsenic	ND	mg/L		0.01		E200.8	09/12/17 18:18 / rlh
Barium	0.04	mg/L		0.01		E200.8	09/12/17 18:18 / rlh
Beryllium	ND	mg/L		0.001		E200.8	09/12/17 18:18 / rlh
Boron	0.59	mg/L		0.05		E200.7	09/14/17 05:06 / slf
Cadmium	ND	mg/L		0.005		E200.8	09/12/17 18:18 / rlh
Chromium	ND	mg/L		0.01		E200.8	09/12/17 18:18 / rlh
Cobalt	ND	mg/L		0.02		E200.8	09/15/17 18:22 / rlh
Lead	ND	mg/L		0.01		E200.8	09/12/17 18:18 / rlh
Lithium	0.37	mg/L	D	0.04		E200.7	09/14/17 05:06 / slf
Mercury	ND	mg/L		0.001		E245.1	09/12/17 13:56 / jag
Molybdenum	ND	mg/L		0.05		E200.8	09/12/17 18:18 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/12/17 18:18 / rlh
Thallium	ND	mg/L		0.002		E200.8	09/12/17 18:18 / rlh

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090709-002

Client Sample ID: MNW-15

Revised Date: 12/15/17 **Report Date:** 09/20/17 Collection Date: 09/07/17 12:00

DateReceived: 09/11/17

Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL		Method	Analysis Date / By
MAJOR IONS							
Calcium	260	mg/L		1		E200.7	09/14/17 05:30 / slf
Magnesium		mg/L		1		E200.7	09/14/17 05:30 / slf
Potassium		mg/L		1		E200.7	09/14/17 05:30 / slf
Sodium		mg/L	D	2		E200.7	09/14/17 05:30 / slf
PHYSICAL PROPERTIES							
Н	3.7	s.u.	Н	0.1		A4500-H B	09/11/17 15:08 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	40		A2540 C	09/12/17 10:49 / rik
INORGANICS							
Chloride	740	mg/L	D	3		E300.0	09/17/17 02:12 / cjm
Sulfate		mg/L	D	9		E300.0	09/17/17 02:12 / cjm
Fluoride		mg/L		0.1		A4500-F C	09/13/17 18:07 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	09/12/17 18:39 / rlh
Arsenic	ND	mg/L		0.01		E200.8	09/12/17 18:39 / rlh
Barium	0.03	mg/L		0.01		E200.8	09/12/17 18:39 / rlh
Beryllium	0.067	mg/L		0.001		E200.8	09/12/17 18:39 / rlh
Boron	9.26	mg/L		0.05		E200.7	09/14/17 05:30 / slf
Cadmium	0.089	mg/L		0.005		E200.8	09/12/17 18:39 / rlh
Chromium	ND	mg/L		0.01		E200.8	09/12/17 18:39 / rlh
Cobalt	0.29	mg/L	D	0.03		E200.7	09/14/17 05:30 / slf
Lead	ND	mg/L		0.01		E200.8	09/12/17 18:39 / rlh
Lithium	0.05	mg/L	D	0.02		E200.7	09/14/17 05:30 / slf
Mercury	ND	mg/L		0.001		E245.1	09/12/17 13:58 / jag
Molybdenum	ND	mg/L		0.05		E200.8	09/12/17 18:39 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/12/17 18:39 / rlh
Thallium	0.002	mg/L		0.002		E200.8	09/12/17 18:39 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090709-003 Client Sample ID: EQBK/SCM/090717

Revised Date: 12/15/17 **Report Date:** 09/20/17 Collection Date: 09/07/17 13:00 DateReceived: 09/11/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	ND	mg/L		1		E200.7	09/14/17 05:34 / slf
Magnesium	ND	mg/L		1		E200.7	09/14/17 05:34 / slf
Potassium	ND	mg/L		1		E200.7	09/14/17 05:34 / slf
Sodium	ND	mg/L		1		E200.7	09/14/17 05:34 / slf
PHYSICAL PROPERTIES							
Н	6.0	s.u.	Н	0.1		A4500-H B	09/11/17 15:11 / pjw
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	09/12/17 10:49 / rik
NORGANICS							
Chloride	ND	mg/L		1		E300.0	09/17/17 02:31 / cjm
Sulfate	ND	mg/L		1		E300.0	09/17/17 02:31 / cjm
luoride	ND	mg/L		0.1		A4500-F C	09/13/17 18:15 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	09/12/17 18:42 / rlh
Arsenic	ND	mg/L		0.01		E200.8	09/12/17 18:42 / rlh
Barium	ND	mg/L		0.01		E200.8	09/12/17 18:42 / rlh
Beryllium	ND	mg/L		0.001		E200.8	09/12/17 18:42 / rlh
Boron	ND	mg/L		0.05		E200.7	09/14/17 05:34 / slf
Cadmium	ND	mg/L		0.005		E200.8	09/12/17 18:42 / rlh
Chromium	ND	mg/L		0.01		E200.8	09/12/17 18:42 / rlh
Cobalt	ND	mg/L		0.02		E200.7	09/14/17 05:34 / slf
ead	ND	mg/L		0.01		E200.8	09/12/17 18:42 / rlh
ithium	ND	mg/L		0.01		E200.7	09/14/17 05:34 / slf
Mercury	ND	mg/L		0.001		E245.1	09/12/17 14:00 / jag
Nolybdenum	ND	mg/L		0.05		E200.8	09/12/17 18:42 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/12/17 18:42 / rlh
Гhallium	ND	mg/L		0.002		E200.8	09/12/17 18:42 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090709-004

Client Sample ID: MNW-18

Revised Date: 12/15/17 **Report Date:** 09/20/17 Collection Date: 09/07/17 13:55

> DateReceived: 09/11/17 Matrix: Ground Water

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
MAJOR IONS							
Calcium	439	mg/L		1		E200.7	09/14/17 05:37 / slf
Magnesium	71	-		1		E200.7	09/14/17 05:37 / slf
Potassium		mg/L		1		E200.7	09/14/17 05:37 / slf
Sodium		mg/L	D	4		E200.7	09/14/17 05:37 / slf
PHYSICAL PROPERTIES							
рН	6.9	s.u.	Н	0.1		A4500-H B	09/11/17 15:14 / pjw
Solids, Total Dissolved TDS @ 180 C		mg/L	D	40		A2540 C	09/12/17 10:49 / rik
INORGANICS							
Chloride	529	mg/L	D	6		E300.0	09/17/17 02:51 / cjm
Sulfate	2200	mg/L	D	20		E300.0	09/17/17 02:51 / cjm
Fluoride	0.1	mg/L		0.1		A4500-F C	09/13/17 18:18 / cjm
METALS, TOTAL RECOVERABLE							
Antimony	ND	mg/L		0.006		E200.8	09/12/17 18:45 / rlh
Arsenic	ND	mg/L		0.01		E200.8	09/12/17 18:45 / rlh
Barium	0.05	mg/L		0.01		E200.8	09/12/17 18:45 / rlh
Beryllium	ND	mg/L		0.001		E200.8	09/12/17 18:45 / rlh
Boron	0.30	mg/L		0.05		E200.7	09/14/17 05:37 / slf
Cadmium	ND	mg/L		0.005		E200.8	09/12/17 18:45 / rlh
Chromium	ND	mg/L		0.01		E200.8	09/12/17 18:45 / rlh
Cobalt	ND	mg/L		0.02		E200.8	09/15/17 18:42 / rlh
Lead	ND	mg/L		0.01		E200.8	09/12/17 18:45 / rlh
Lithium	0.36	mg/L	D	0.04		E200.7	09/14/17 05:37 / slf
Mercury	ND	mg/L		0.001		E245.1	09/12/17 14:02 / jag
Molybdenum	ND	mg/L		0.05		E200.8	09/12/17 18:45 / rlh
Selenium	ND	mg/L		0.01		E200.8	09/12/17 18:45 / rlh
Thallium	ND	mg/L		0.002		E200.8	09/12/17 18:45 / rlh

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

H - Analysis performed past recommended holding time.



Prepared by Billings, MT Branch

Analyte Co	ount Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batcl	n: 113581
Lab ID: MB-113581	Method Blank				Run: BAL #	SD-15_170912C		09/12/	17 10:49
Solids, Total Dissolved TDS @ 180 0	ND ND	mg/L	4						
Lab ID: LCS-113581	Laboratory Co	ontrol Sample			Run: BAL #	SD-15_170912C		09/12/	17 10:49
Solids, Total Dissolved TDS @ 180 0	1000	mg/L	10	99	90	110			
Lab ID: B17090709-001A DUP	Sample Duplic	cate			Run: BAL #	SD-15_170912C		09/12/	17 10:49
Solids, Total Dissolved TDS @ 180 0	6640	mg/L	99				2.5	5	



Prepared by Billings, MT Branch

Analyte		Count Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-F C						Analytic	al Run:	MAN-TECH_	_170913A
Lab ID:	ICV	Initial Calibra	tion Verification	n Standard					09/13/	17 16:03
Fluoride		0.940	mg/L	0.10	94	90	110			
Method:	A4500-F C								Batch:	R286653
Lab ID:	MBLK	Method Blank	<			Run: MAN-	TECH_170913A		09/13/	17 16:01
Fluoride		ND	mg/L	0.02						
Lab ID:	LFB	Laboratory Fo	ortified Blank			Run: MAN-	TECH_170913A		09/13/	17 16:06
Fluoride		0.950	mg/L	0.10	95	90	110			
Lab ID:	B17090657-001AMS	Sample Matri	x Spike			Run: MAN-	TECH_170913A		09/13/	17 17:44
Fluoride		1.71	mg/L	0.10	103	80	120			
Lab ID:	B17090657-001AMSI	Sample Matri	x Spike Duplica	ate		Run: MAN-	TECH_170913A		09/13/	17 17:47
Fluoride		1.71	mg/L	0.10	103	80	120	0.0	10	
Lab ID:	B17090709-006AMS	Sample Matri	x Spike			Run: MAN-	TECH_170913A		09/13/	17 18:38
Fluoride		1.06	mg/L	0.10	90	80	120			
Lab ID:	B17090709-006AMSI	Sample Matri	x Spike Duplica	ate		Run: MAN-	TECH_170913A		09/13/	17 18:41
Fluoride		1.05	mg/L	0.10	89	80	120	0.9	10	





Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	A4500-H B							Analytic	al Run: PH	ISC _101-B_	_170911A
Lab ID:	pH 8	Initia	al Calibratio	n Verificat	tion Standard					09/11/	17 08:41
рН			7.98	s.u.	0.10	100	98	102			
Method:	A4500-H B									Batch:	R286396
Lab ID:	B17090709-007ADU	P San	nple Duplica	ate			Run: PHSC	_101-B_1709	11A	09/11/	17 15:24
pН			12.1	s.u.	0.10				0.2	3	

Prepared by Billings, MT Branch

Texas Municipal Power Agency

Report Date: 09/20/17 Project: TMPA CCRR Work Order: B17090709

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E300.0							Analytical	Run: IC M	IETROHM 1_	_170915B
Lab ID:	ICV	2 Initi	ial Calibratio	n Verification Sta	andard					09/15/	17 13:51
Chloride			2.22	mg/L	1.0	99	90	110			
Sulfate			9.01	mg/L	1.0	100	90	110			
Method:	E300.0									Batch:	R286837
Lab ID:	ICB	2 Me	thod Blank				Run: IC ME	TROHM 1_170	0915B	09/15/	17 14:11
Chloride			ND	mg/L	0.006						
Sulfate			ND	mg/L	0.02						
Lab ID:	LFB	2 Lab	oratory For	tified Blank			Run: IC ME	TROHM 1_170	0915B	09/15/	17 14:30
Chloride			10.2	mg/L	1.0	102	90	110			
Sulfate			30.3	mg/L	1.0	101	90	110			
Lab ID:	B17090709-001AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 1_170	0915B	09/17/	17 01:33
Chloride			3730	mg/L	6.1	91	90	110			E
Sulfate			3950	mg/L	18	106	90	110			
Lab ID:	B17090709-001AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0915B	09/17/	17 01:52
Chloride			3720	mg/L	6.1	90	90	110	0.3	20	E
Sulfate			3960	mg/L	18	106	90	110	0.3	20	
Lab ID:	B17091041-008AMS	2 Sar	mple Matrix	Spike			Run: IC ME	TROHM 1_170	0915B	09/17/	17 06:06
Chloride			1560	mg/L	6.1	106	90	110			
Sulfate			7960	mg/L	18	97	90	110			
Lab ID:	B17091041-008AMSI	D 2 Sar	mple Matrix	Spike Duplicate			Run: IC ME	TROHM 1_170	0915B	09/17/	17 06:26
Chloride			1550	mg/L	6.1	104	90	110	8.0	20	
Sulfate			7910	mg/L	18	95	90	110	0.6	20	

Qualifiers:

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/20/17Project:TMPA CCRRWork Order:B17090709

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD RPDLimit	Qual
Method:	E200.7							Analy	tical Run: ICP203-E	3_170913A
Lab ID:	ICV	7 Co	ntinuing Cal	ibration Verif	ication Standa	rd			09/1	3/17 11:15
Boron			2.47	mg/L	0.10	99	95	105		
Calcium			24.1	mg/L	1.0	97	95	105		
Cobalt			2.41	mg/L	0.020	96	95	105		
Lithium			1.20	mg/L	0.10	96	95	105		
Magnesiun	n		24.3	mg/L	1.0	97	95	105		
Potassium			23.9	mg/L	1.0	96	95	105		
Sodium			24.0	mg/L	1.0	96	95	105		
Method:	E200.7								Bat	ch: 113553
Lab ID:	MB-113553	8 Me	thod Blank				Run: ICP20	3-B_170913A	09/1	4/17 04:55
Boron			ND	mg/L	0.003			_		
Calcium			ND	mg/L	0.08					
Cobalt			ND	mg/L	0.005					
Lithium			ND	mg/L	0.004					
Magnesiun	n		ND	mg/L	0.01					
Potassium			ND	mg/L	0.07					
Sodium			ND	mg/L	0.03					
Magnesiun	n, meq		ND	meq/L	0.001					
Lab ID:	LCS-113553	7 Lal	ooratory Cor	ntrol Sample			Run: ICP20	3-B_170913A	09/1	4/17 04:58
Boron			0.464	mg/L	0.050	93	85	_ 115		
Calcium			25.2	mg/L	1.0	101	85	115		
Cobalt			0.511	mg/L	0.0052	102	85	115		
Lithium			0.484	mg/L	0.10	97	85	115		
Magnesiun	n		25.5	mg/L	1.0	102	85	115		
Potassium			24.6	mg/L	1.0	98	85	115		
Sodium			24.8	mg/L	1.0	99	85	115		
Lab ID:	B17090709-001BMS3	3 7 Sa	mple Matrix	Spike			Run: ICP20	3-B_170913A	09/1	4/17 05:16
Boron			1.08	mg/L	0.050	99	70	130		
Calcium			626	mg/L	1.0		70	130		Α
Cobalt			0.504	mg/L	0.052	101	70	130		
Lithium			0.823	mg/L	0.10	91	70	130		
Magnesiun	n		120	mg/L	1.0	88	70	130		
Potassium			65.4	mg/L	1.0	91	70	130		
Sodium			1130	mg/L	4.2		70	130		Α
Lab ID:	B17090709-001BMSI) 7 Sa	mple Matrix	Spike Duplic	ate		Run: ICP20	3-B_170913A	09/1	4/17 05:27
Boron			1.11	mg/L	0.050	104	70	130	2.4 20	· · · · ·
Calcium			631	mg/L	1.0		70	130	0.7 20	Α
Cobalt			0.506	mg/L	0.052	101	70	130	0.4 20	•
			0.855	mg/L	0.10	97	70	130	3.8 20	
Lithium										
Lithium Magnesiun	n		120	ma/i	1 ()	91	7(1	1.70	() ()	
Magnesiun Potassium			120 65.7	mg/L mg/L	1.0 1.0	91 92	70 70	130 130	0.6 20 0.4 20	

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.



Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/20/17Project:TMPA CCRRWork Order:B17090709

Analyte		Cour	nt Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.7									Batc	h: 113553
Lab ID:	B17090709-001BMSE	7	Sample Matrix	Spike Duplicate			Run: ICP20	3-B_170913A		09/14/	/17 05:27
Lab ID:	B17090786-002AMS3	7	Sample Matrix	Spike			Run: ICP20	3-B_170913A		09/14/	/17 06:20
Boron			0.664	mg/L	0.050	98	70	130			
Calcium			89.3	mg/L	1.0	103	70	130			
Cobalt			0.472	mg/L	0.0052	94	70	130			
Lithium			0.552	mg/L	0.10	94	70	130			
Magnesiur	m		66.4	mg/L	1.0	104	70	130			
Potassium	ı		57.9	mg/L	1.0	99	70	130			
Sodium			128	mg/L	1.0		70	130			Α
Lab ID:	B17090786-002AMSD	7	Sample Matrix	Spike Duplicate			Run: ICP20	3-B_170913A		09/14/	/17 06:24
Boron			0.643	mg/L	0.050	94	70	130	3.2	20	
Calcium			86.2	mg/L	1.0	90	70	130	3.6	20	
Cobalt			0.468	mg/L	0.0052	94	70	130	1.0	20	
Lithium			0.532	mg/L	0.10	90	70	130	3.7	20	
Magnesiur	n		64.4	mg/L	1.0	96	70	130	3.1	20	
Potassium	ı		56.0	mg/L	1.0	91	70	130	3.4	20	
Sodium			123	mg/L	1.0		70	130	4.3	20	Α

Qualifiers:

RL - Analyte reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/20/17Project:TMPA CCRRWork Order:B17090709

Analyte		Count Resu	ılt Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	l Run: I	CPMS206-B	_170912A
Lab ID:	QCS	10 Initial Calib	ration Verific	ation Standard					09/12/	/17 11:34
Antimony		0.050	01 mg/L	0.050	100	90	110			
Arsenic		0.05	10 mg/L	0.0050	102	90	110			
Barium		0.049	92 mg/L	0.10	98	90	110			
Beryllium		0.026	64 mg/L	0.0010	106	90	110			
Cadmium		0.026	60 mg/L	0.0010	104	90	110			
Chromium		0.050	06 mg/L	0.010	101	90	110			
Lead		0.050	00 mg/L	0.010	100	90	110			
Molybdenu	ım	0.045	57 mg/L	0.0050	91	90	110			
Selenium		0.05	14 mg/L	0.0050	103	90	110			
Thallium		0.055	51 mg/L	0.10	110	90	110			
Method:	E200.8								Batcl	h: 113553
Lab ID:	MB-113553	11 Method Bla	ank			Run: ICPM	S206-B_170912 <i>A</i>	4	09/12/	/17 18:01
Antimony		N	ID mg/L	0.00004						
Arsenic		N	ID mg/L	0.0002						
Barium		N	ID mg/L	0.00005						
Beryllium		0.000	02 mg/L	0.00008						
Cadmium		N	ID mg/L	0.00003						
Chromium		N	ID mg/L	0.0001						
Cobalt		0.0000	08 mg/L	0.00002						
Lead		0.0000	03 mg/L	0.00003						
Molybdenu	ım	0.000)2 mg/L	0.00003						
Selenium		N	ID mg/L	0.0004						
Thallium		0.0000	09 mg/L	7E-06						
Lab ID:	LCS-113553	10 Laboratory	Control Sam	iple		Run: ICPM	S206-B_170912 <i>F</i>	4	09/12/	/17 18:21
Antimony		0.53	36 mg/L	0.0050	107	85	115			
Arsenic		0.52	21 mg/L	0.0010	104	85	115			
Barium		0.52	25 mg/L	0.010	105	85	115			
Beryllium		0.25	52 mg/L	0.0010	101	85	115			
Cadmium		0.25	59 mg/L	0.0010	104	85	115			
Chromium		0.50	00 mg/L	0.0010	100	85	115			
Lead		0.53	34 mg/L	0.0010	107	85	115			
Molybdenu	ım	0.50	00 mg/L	0.0050	100	85	115			
Selenium		0.5	15 mg/L	0.0050	103	85	115			
Thallium		0.52	23 mg/L	0.0010	105	85	115			
Lab ID:	B17090709-001BMS3	11 Sample Ma	atrix Spike			Run: ICPM	S206-B_170912 <i>F</i>	4	09/12/	/17 18:25
Antimony		0.49	99 mg/L	0.0010	100	70	130			
Arsenic		0.53	31 mg/L	0.0010	106	70	130			
Barium		0.52		0.050	97	70	130			
Beryllium		0.24	11 mg/L	0.0010	96	70	130			
Cadmium		0.25	55 mg/L	0.0010	102	70	130			
Chromium		0.50	04 mg/L	0.0050	101	70	130			
Cobalt		0.49		0.0050	100	70	130			

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/20/17Project:TMPA CCRRWork Order:B17090709

Analyte		Count R	esult	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batc	h: 113553
Lab ID:	B17090709-001BMS	3 11 Sample	e Matrix	Spike			Run: ICPM	S206-B_170912A		09/12	/17 18:25
Lead			0.482	mg/L	0.0010	96	70	130			
Molybdenu	ım		0.482	mg/L	0.0010	96	70	130			
Selenium			0.495	mg/L	0.0018	99	70	130			
Thallium			0.447	mg/L	0.00050	89	70	130			
Lab ID:	B17090709-001BMSI	D 11 Sample	e Matrix	Spike Dupl	licate		Run: ICPM	S206-B_170912A		09/12	/17 18:28
Antimony			0.496	mg/L	0.0010	99	70	130	0.5	20	
Arsenic			0.538	mg/L	0.0010	108	70	130	1.4	20	
Barium			0.514	mg/L	0.050	96	70	130	1.4	20	
Beryllium			0.249	mg/L	0.0010	100	70	130	3.5	20	
Cadmium			0.248	mg/L	0.0010	99	70	130	2.9	20	
Chromium			0.508	mg/L	0.0050	101	70	130	0.7	20	
Cobalt			0.488	mg/L	0.0050	97	70	130	2.2	20	
Lead			0.482	mg/L	0.0010	96	70	130	0.0	20	
Molybdenu	ım		0.472	mg/L	0.0010	94	70	130	2.1	20	
Selenium			0.508	mg/L	0.0018	102	70	130	2.6	20	
Thallium			0.457	mg/L	0.00050	91	70	130	2.1	20	
Lab ID:	B17090786-002AMS3	3 11 Sample	e Matrix	Spike			Run: ICPM	S206-B_170912A		09/12	/17 19:54
Antimony			0.490	mg/L	0.0010	98	70	130			
Arsenic			0.542	mg/L	0.0010	107	70	130			
Barium			0.536	mg/L	0.050	95	70	130			
Beryllium			0.216	mg/L	0.0010	86	70	130			
Cadmium			0.250	mg/L	0.0010	100	70	130			
Chromium			0.497	mg/L	0.0050	99	70	130			
Cobalt			0.527	mg/L	0.0050	105	70	130			
Lead			0.484	mg/L	0.0010	97	70	130			
Molybdenu	ım		0.478	mg/L	0.0010	95	70	130			
Selenium			0.467	mg/L	0.0010	93	70	130			
Thallium			0.530	mg/L	0.00050	106	70	130			
Lab ID:	B17090786-002AMSI) 11 Sample	e Matrix	Spike Dupl	licate		Run: ICPM	S206-B_170912A		09/12	/17 19:58
Antimony			0.507	mg/L	0.0010	101	70	130	3.4	20	
Arsenic			0.535	mg/L	0.0010	105	70	130	1.3	20	
Barium			0.553	mg/L	0.050	98	70	130	3.1	20	
Beryllium			0.229	mg/L	0.0010	92	70	130	5.8	20	
Cadmium			0.249	mg/L	0.0010	100	70	130	0.2	20	
Chromium			0.500	mg/L	0.0050	100	70	130	0.4	20	
Cobalt			0.541	mg/L	0.0050	108	70	130	2.6	20	
Lead			0.501	mg/L	0.0010	100	70	130	3.6	20	
Molybdenu	ım		0.490	mg/L	0.0010	97	70	130	2.6	20	
Selenium			0.466	mg/L	0.0010	92	70	130	0.2	20	
Thallium			0.519	mg/L	0.00050	104	70	130	2.1	20	
			0	∌, ⊑	2.00000	101	. 3				

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Client:Texas Municipal Power AgencyReport Date:09/20/17Project:TMPA CCRRWork Order:B17090709

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8							Analytical	Run: I	CPMS206-B_	_170915 <i>A</i>
Lab ID:	QCS		Initial Calibratio	n Verificatio	on Standard					09/15/	17 18:04
Cobalt			0.0517	mg/L	0.010	103	90	110			
Method:	E200.8									Batcl	n: 113553
Lab ID:	MB-113553	11	Method Blank				Run: ICPM	S206-B_170915A		09/15/	17 18:18
Antimony			ND	mg/L	0.00004						
Arsenic			ND	mg/L	0.0002						
Barium			0.0003	mg/L	0.00005						
Beryllium			ND	mg/L	0.00008						
Cadmium			ND	mg/L	0.00003						
Chromium			ND	mg/L	0.0001						
Cobalt			ND	mg/L	0.00002						
Lead			0.00003	mg/L	0.00003						
Molybdenu	m		ND	mg/L	0.00003						
Selenium			ND	mg/L	0.0004						
Thallium			0.00003	mg/L	7E-06						
Lab ID:	LCS-113553	11	Laboratory Cor	trol Sample)		Run: ICPM	S206-B_170915A		09/15/	17 18:25
Antimony			0.553	mg/L	0.0050	111	85	115			
Arsenic			0.545	mg/L	0.0010	109	85	115			
Barium			0.542	mg/L	0.010	108	85	115			
Beryllium			0.257	mg/L	0.0010	103	85	115			
Cadmium			0.262	mg/L	0.0010	105	85	115			
Chromium			0.502	mg/L	0.0010	100	85	115			
Cobalt			0.550	mg/L	0.0010	110	85	115			
Lead			0.536	mg/L	0.0010	107	85	115			
	m		0.514	-	0.0010	107	85	115			
Molybdenui Selenium	III		0.506	mg/L	0.0050	103	85	115			
Thallium			0.535	mg/L mg/L	0.0030	107	85	115			
Lab ID:	B17090709-001BMS3	3 11 9	Sample Matrix	-			Run: ICPM:	S206-B_170915A		09/15/	17 18:29
Antimony			0.530	mg/L	0.0010	106	70	130		00/10/	17 10.20
Arsenic			0.539	mg/L	0.0010	108	70	130			
Barium			0.541	mg/L	0.050	100	70	130			
Beryllium			0.254	mg/L	0.0010	101	70	130			
Cadmium			0.251	mg/L	0.0010	100	70	130			
Chromium			0.504	mg/L	0.0010	101	70	130			
Cobalt			0.510		0.0050	101		130			
				mg/L			70 70				
Lead			0.522	mg/L	0.0010	104	70 70	130			
Molybdenu	Ш		0.506	mg/L	0.0010	101	70 70	130			
Selenium Thallium			0.492 0.500	mg/L mg/L	0.0018 0.00050	98 100	70 70	130 130			
	B17090709-001BMSE) 11 (S206-B 170915A		00/15/	17 10.22
Lab ID:	1 CINIO I 00-60 I 060 I I O	۱۱۱ ر	•			405		_			17 18:32
Antimony			0.524	mg/L	0.0010	105	70 70	130	1.1	20	
Arsenic			0.550	mg/L	0.0010	110	70	130	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8									Batch	ı: 113553
Lab ID:	B17090709-001BMSI	1 1 Sam	ple Matrix	Spike Duplicate			Run: ICPM	S206-B_170915A		09/15/	17 18:32
Barium			0.536	mg/L	0.050	99	70	130	0.9	20	
Beryllium			0.253	mg/L	0.0010	101	70	130	0.4	20	
Cadmium			0.251	mg/L	0.0010	101	70	130	0.3	20	
Chromium			0.504	mg/L	0.0050	101	70	130	0.2	20	
Cobalt			0.508	mg/L	0.0050	101	70	130	0.4	20	
Lead			0.504	mg/L	0.0010	101	70	130	3.4	20	
Molybdenu	m		0.492	mg/L	0.0010	98	70	130	2.8	20	
Selenium			0.490	mg/L	0.0018	98	70	130	0.3	20	
Thallium			0.482	mg/L	0.00050	96	70	130	3.6	20	

Prepared by Billings, MT Branch

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E245.1							Analytic	al Run: l	HGCV202-B	_170912B
Lab ID:	ICV	Init	al Calibrati	on Verifica	ition Standard					09/12/	/17 13:45
Mercury			0.00191	mg/L	0.00010	96	90	110			
Method:	E245.1									Batcl	h: 113565
Lab ID:	MB-113565	Me	thod Blank				Run: HGCV	/202-B_170912E	}	09/12/	/17 13:50
Mercury			ND	mg/L	1E-06						
Lab ID:	LCS-113565	Lab	oratory Co	ntrol Samp	ole		Run: HGCV	/202-B_170912E	}	09/12/	/17 13:52
Mercury			0.00193	mg/L	0.00010	96	85	115			
Lab ID:	B17090709-009BMS	Sar	nple Matrix	Spike			Run: HGCV	/202-B_170912E	}	09/12/	/17 14:13
Mercury			0.00170	mg/L	0.00010	85	70	130			
Lab ID:	B17090709-009BMSI	D Sar	mple Matrix	Spike Du	olicate		Run: HGCV	/202-B_170912E	}	09/12/	/17 14:15
Mercury			0.00182	mg/L	0.00010	91	70	130	6.6	30	

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by: Siobhan H. Coop

B17090709

Date Received: 9/11/2017

	•		_		
Reviewed by:	BL2000\cindy		Re	ceived by: shc	
Reviewed Date:	9/11/2017		Car	rier name: FedEx	
Shipping container/cooler in	good condition?	Yes 🔽	No 🗌	Not Present	
Custody seals intact on all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Present	
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present ✓	
Chain of custody present?		Yes ✓	No 🗌		
Chain of custody signed whe	n relinquished and received?	Yes ✓	No 🗌		
Chain of custody agrees with	sample labels?	Yes ✓	No 🗌		
Samples in proper container	bottle?	Yes ✓	No 🗌		
Sample containers intact?		Yes ✓	No 🗌		
Sufficient sample volume for	indicated test?	Yes ✓	No 🗌		
All samples received within h (Exclude analyses that are countries pH, DO, Res Cl, Su	onsidered field parameters	Yes ✓	No 🗌		
Temp Blank received in all sl	nipping container(s)/cooler(s)?	Yes ✓	No 🗌	Not Applicable	
Container/Temp Blank tempe	erature:	°C Melted Ice			
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted	
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 3.3°C and shipping container 2 was 2.1°C.

The 3rd shipping container with samples MNW-15 and APMW-6 was received on 9/11/17 at 09:15 by Siobhan Coop at 10.0°C on ice from Fedex Express.

ENERGY (33)
Inst our People, Tust our Date.

Chain of Custody & Analytical Request Record

Page

Page 1 of 1

MORK ORDER 9/11/17 -0031 ALL ANAMSIS EXCEPT -007 * APPZ-4: no radium 183 Samples collected. 850 817690ABA-00 7005 g B All turnaround times are standard unless marked as MUST be contacted prior to RUSH sample submittal for CHOW SO FILE charges and scheduling -See Instructions Page Energy Laboratories Receipt Number (cash/check only) RUSH. Stepature Signature Comments See Attached ₹ Amount \$ Date/Time **Analysis Requested** Report Information (if different than Account Information) □ LEVEL IV □ NELAC □ EDD/EDT (contact taboratory) □ Other Speck aceived by Laborator Cash Received by (print) ပ္ပ ALCON. Special Report/Formats: Matrix (See Codes Above) Company/Name Mailing Address Temp Blank Y N Matrix Codes City, State, Zip 3 V - Vegetation B - Bioassa) OW - Drinking Water S - Soils/ Solids W- Water 0 - Other A-Air amel Contact Phone Number of Containers Email 1 Receipt Temp 1600 1720 0401 1450 Project: CCRR **E**mail 900 300 1355 0/8/ Sampler Phone 512-795-0360 Time **2** 9/08/17 @ 1300 ☐ Unprocessed ore (NOT ground or refined)* EPA/State Compliance XYes 9-7-17 Mailing Address 3755 S. Capital of TX Hux. #375 **Bottle Order** Date _ N N Project Name, PWSID, Permit, etc. Client; TMPA Custody Seals greg. Seifert Bamectwalem MINING CLIENTS, please indicate sample type. Companyiname Amec Foster Wheder Account Information (Billing information) Austin, TX 78704 Sample Identification Receive Invoice Mand Copy Pamail (Name, Location, Interval, etc.) EQBK/SCM/090717 Sew Macon Quote Relinquished by (print) Cooler ID(s) Phone 512-795-0560 Grea Selfert Sampler Name S. Macon Project Information □ Byproduct 11 (e)2 material SFL MW-7 APMW-6 MNW-18 MNW)-16 MNW-15 AP PZ-4 MNW-11 Sample Origin State DUP-1 Record MUST City, State, Zip Purchase Order Shipped By be signed Custody Contact Email

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

ANALYTICAL SUMMARY REPORT

October 04, 2017

Texas Municipal Power Agency PO Box 7000 Bryan, TX 77805-7000

Work Order: B17090710 Quote ID: B3997 - CCRR

Project Name: TMPA CCRR

Energy Laboratories Inc Billings MT received the following 8 samples for Texas Municipal Power Agency on 9/11/2017 for analysis.

Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B17090710-001	SFL MW-7	09/07/17 10:40 09/11/17	Ground Water	Radium 226 + Radium 228 Radium 226, Total Radium 228, Total
B17090710-002	MNW-15	09/07/17 12:00 09/11/17	Ground Water	Same As Above
B17090710-003	EQBK/SCM/090717	09/07/17 13:00 09/11/17	Ground Water	Same As Above
B17090710-004	MNW-18	09/07/17 13:55 09/11/17	Ground Water	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Report Date: 10/04/17

CLIENT: Texas Municipal Power Agency

Project: TMPA CCRR

Work Order: B17090710 CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002 and WY00937.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR
Lab ID: B17090710-001
Client Sample ID: SFL MW-7

Report Date: 10/04/17
Collection Date: 09/07/17 10:40
DateReceived: 09/11/17

Matrix: Ground Water

Analyses	Result U	Jnits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.54 p	Ci/L				E903.0	10/01/17 10:34 / eli-ca
Radium 226 precision (±)	0.18 p					E903.0	10/01/17 10:34 / eli-ca
Radium 226 MDC	0.22 p	Ci/L				E903.0	10/01/17 10:34 / eli-ca
Radium 228	2.4 p	Ci/L				RA-05	09/25/17 14:59 / eli-ca
Radium 228 precision (±)	1.0 p	Ci/L				RA-05	09/25/17 14:59 / eli-ca
Radium 228 MDC	1.5 p	Ci/L				RA-05	09/25/17 14:59 / eli-ca
Radium 226 + Radium 228	2.9 p	Ci/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.0 p	Ci/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.5 p	Ci/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090710-002 Client Sample ID: MNW-15

Report Date: 10/04/17 Collection Date: 09/07/17 12:00 DateReceived: 09/11/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.31	pCi/L				E903.0	10/01/17 10:34 / eli-ca
Radium 226 precision (±)		pCi/L				E903.0	10/01/17 10:34 / eli-ca
Radium 226 MDC	0.18	pCi/L				E903.0	10/01/17 10:34 / eli-ca
Radium 228	1.6	pCi/L				RA-05	09/25/17 14:59 / eli-ca
Radium 228 precision (±)	0.98	pCi/L				RA-05	09/25/17 14:59 / eli-ca
Radium 228 MDC	1.2	pCi/L				RA-05	09/25/17 14:59 / eli-ca
Radium 226 + Radium 228	1.9	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090710-003 Client Sample ID: EQBK/SCM/090717

Report Date: 10/04/17 Collection Date: 09/07/17 13:00 DateReceived: 09/11/17

Matrix: Ground Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	0.05	pCi/L	U			E903.0	10/01/17 12:15 / eli-ca
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/01/17 12:15 / eli-ca
Radium 226 MDC	0.22	pCi/L				E903.0	10/01/17 12:15 / eli-ca
Radium 228	0.71	pCi/L	U			RA-05	09/25/17 16:36 / eli-ca
Radium 228 precision (±)	1.1	pCi/L				RA-05	09/25/17 16:36 / eli-ca
Radium 228 MDC	1.8	pCi/L				RA-05	09/25/17 16:36 / eli-ca
Radium 226 + Radium 228	8.0	pCi/L	U			A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Prepared by Billings, MT Branch

Client: Texas Municipal Power Agency

Project: TMPA CCRR Lab ID: B17090710-004 Client Sample ID: MNW-18

Report Date: 10/04/17 Collection Date: 09/07/17 13:55 DateReceived: 09/11/17

Matrix: Ground Water

Analyses	Result l	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Radium 226	1.5 p	oCi/L				E903.0	10/01/17 12:15 / eli-ca
Radium 226 precision (±)	0.37 p	oCi/L				E903.0	10/01/17 12:15 / eli-ca
Radium 226 MDC	0.19 p	oCi/L				E903.0	10/01/17 12:15 / eli-ca
Radium 228	5.6 p	oCi/L				RA-05	09/25/17 16:36 / eli-ca
Radium 228 precision (±)	1.4 p	oCi/L				RA-05	09/25/17 16:36 / eli-ca
Radium 228 MDC	1.6 p	oCi/L				RA-05	09/25/17 16:36 / eli-ca
Radium 226 + Radium 228	7.2 p	oCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 precision (±)	1.4 p	oCi/L				A7500-RA	10/03/17 20:27 / eli-ca
Radium 226 + Radium 228 MDC	1.6 p	oCi/L				A7500-RA	10/03/17 20:27 / eli-ca

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Billings, MT 800.735.4489 • Casper, WY 888.235.0515 Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Client:Texas Municipal Power AgencyReport Date:10/03/17Project:TMPA CCRRWork Order:B17090710

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0								Batch: RA	226-8664
Lab ID:	LCS-RA226-8664	Laboratory Co	ntrol Sample			Run: G500	0W_170920B		10/01	/17 10:33
Radium 226	•	9.6	pCi/L		95	80	120			
Lab ID:	MB-RA226-8664	Method Blank				Run: G500	0W_170920B		10/01	/17 10:33
Radium 226	i e	0.1	pCi/L							U
Radium 226	precision (±)	0.1	pCi/L							
Radium 226	MDC	0.2	pCi/L							
Lab ID:	B17090710-001AMS	Sample Matrix	Spike			Run: G500	0W_170920B		10/01	/17 10:34
Radium 226	;	15	pCi/L		59	70	130			S
- Spike resp	onse is outside of the acceptan	ce range for this and	alysis. Since the LO	S and the F	RPD recov	eries are acce	ptable, the respon	se is cons	idered to be ma	atrix relate

⁻ Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD recoveries are acceptable, the response is considered to be matrix relate. The batch is approved.

 Lab ID:
 B17090710-001AMSD
 Sample Matrix Spike Duplicate
 Run: G5000W_170920B
 10/01/17 10:34

 Radium 226
 17
 pCi/L
 68
 70
 130
 15
 20
 S

Qualifiers:

⁻ Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD recoveries are acceptable, the response is considered to be matrix relate. The batch is approved.





Prepared by Casper, WY Branch

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: RA-05		Batch: RA228-5610
Lab ID: LCS-228-RA226-8664	Laboratory Control Sample	Run: TENNELEC-3_170920C 09/25/17 14:59
Radium 228	9.2 pCi/L	87 80 120
Lab ID: MB-RA226-8664	Method Blank	Run: TENNELEC-3_170920C 09/25/17 14:59
Radium 228	0.7 pCi/L	U
Radium 228 precision (±)	0.9 pCi/L	
Radium 228 MDC	1 pCi/L	
Lab ID: B17090710-005AMS	Sample Matrix Spike	Run: TENNELEC-3_170920C 09/25/17 14:59
Radium 228	26 pCi/L	106 70 130
Lab ID: B17090710-005AMSD	Sample Matrix Spike Duplicate	Run: TENNELEC-3_170920C 09/25/17 14:59
Radium 228	23 pCi/L	93 70 130 12 20

B17090710

Work Order Receipt Checklist

Texas Municipal Power Agency

Login completed by:	Siobhan H. Coop	Date Received: 9/11/2017						
Reviewed by:	BL2000\cindy		Red	ceived by: shc				
Reviewed Date:	9/11/2017		Carrier name: FedEx					
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present				
Custody seals intact on all shipping container(s)/cooler(s)?		Yes 🔽	No 🗌	Not Present				
Custody seals intact on all sample bottles?		Yes	No 🗌	Not Present ✓				
Chain of custody present?		Yes 🗸	No 🗌					
Chain of custody signed whe	en relinquished and received?	Yes 🗸	No 🗌					
Chain of custody agrees with	n sample labels?	Yes 🗸	No 🗌					
Samples in proper container	/bottle?	Yes √	No 🗌					
Sample containers intact?		Yes √	No 🗌					
Sufficient sample volume for	indicated test?	Yes 🗸	No 🗌					
All samples received within h (Exclude analyses that are or such as pH, DO, Res CI, Su	onsidered field parameters	Yes ✓	No 🗌					
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Applicable				
Container/Temp Blank tempe	erature:	°C Melted Ice						
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted ✓				
Water - pH acceptable upon	receipt?	Yes ✓	No 🗌	Not Applicable				

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 3.3°C and shipping container 2 was 2.1°C.

The 3rd shipping container with samples MNW-15 and APMW-6 was received on 9/11/17 at 09:15 by Siobhan Coop at 10.0°C on ice from Fedex Express.

ENERGY (3) Trust our People. Trust our Data Account Information (Billing information)

Chain of Custody & Analytical Request Record

ww.energylab.com

- Orther this - North Orde Se allelta lad then analysis * APPZ-4: no radium Samples collected. standard unless marked as RUSH. MUST be contacted prior to RUSH sample submittal for -000 -007 18 -8 -87 -033 ģ 613090710-00 All turnaround times are Seprenti charges and scheduling See Instructions Page Energy Laboratories Comments Slemature Signature See Attached **Analysis Requested** Report Information (if different than Account Information) ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other Payment Typ Macalvad by Laboratory Received by (print) Receive Report DHard Copy DEmail LABORATORY USE ONLY <u>8</u> z ნ≻ Special Report/Formats; Matrix (See Codes Above) Mailing Address Company/Name Matrix Codes City, State, Zip V - Vegetation 3 B - Bioassay Temp Blank Y N DW - Drinking Water Soils/ Solids Samuel (W- Water O - Other A - Air Contact Phone Number of Containers Email 7 Receipt Temp 1720 1600 Project: CRR 9-7-17 1040 Semail Mail Sampler Phone 512-795-0360 1200 1300 1355 1450 0/8/ EPA/State Compliance XYes □ No Time 9/03//7 @ | 300 Detertime ☐ Unprocessed ore (NOT ground or refined)* Collection Mailing Address 3755 S. Capital of TX Hwx. #375 Date Intact Y N Project Name, PWSID, Permit, etc. Client: TMPA Custody Seals Email greg. Seifert Bamectwich CompanyiName Amec Foster Wheeler MINING CLIENTS, please indicate sample type. City, State, Zip Austin, TX 78704 Sample Identification Receive Invoice Mard Copy Amail (Name, Location, Interval, etc.) /SCM/0907/17 Sam Macon Relinquished by (print) Quote Phone 512-795-0560 Cooler ID(s) Contact Grea Settert Sample Origin State Sampler Name S. Macon Relinquished by Project Information ☐ Byproduct 11 (e)2 materfal SFL MW-7 APMW-6 MNW-15 MNW-18 MNW-16 AP PZ-4 MNE-11 DUP-1 Record MUST be signed Purchase Order Eadk Shipped By Custody

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-12/16 v.1

Receipt Number (cash/chack only)

Amount

Cash Check

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